Effect of Service Quality and Customer Satisfaction on Customer Loyalty - A Comparative Study of TATA SIA (Vistara) and Air India

A Thesis

Submitted in partial fulfillment of the requirements for the

Award of the degree of

DOCTOR OF PHILOSOPHY

In

(Tourism Management)

By

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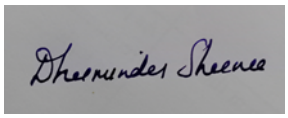
PUNJAB

2021

DECLARATION

I do hereby solemnly declare that the thesis "Effect of Service Quality and Customer Satisfaction on Customer Loyalty - A Comparative Study of TATA SIA (Vistara) and Air India" submitted to Lovely Professional University Phagwara Punjab for award of PhD (Tourism Management) is an original academic work done by me and that it has not been submitted anywhere.

That the thesis does not contain any material to the best of my knowledge, that has been written or published previously except where due references have been made and acknowledged in it.



Dharminder Sharma

CERTIFICATE

This is to certify that the thesis **"Effect of Service Quality and Customer Satisfaction on Customer Loyalty - A Comparative Study of TATA SIA (Vistara) and Air India"** submitted by Mr. Dharminder Sharma for the award of degree for Doctor of Philosophy in Tourism Management by Lovely Professional University, Phagwara, Punjab is a bonafied research carried out under my supervision and guidance.

This is also to certify that the results of the research report in this thesis have not been presented for any other degree or diploma of any others University.

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ABSTRACT

Managing profitable airlines has always been an immense challenge for aviation companies. The added intense competition, market volatility, legal regulations shrinking profit margins has exposed airlines to disadvantageous cost structure with high fixed expenses. The current deregulation and liberalization of this sector in recent decades particularly in the last few years, has led towards the abolition of the tariff controls, has further changed the competitive environment by encouraging new entrants into the market. The customers being price conscious has made the airlines to move to a cost based strategy, enabling the entry of different models of airline operations. The entry of low-frill airlines has become a dynamic challenger on this competitive market. In contrast to the traditional airlines i.e. full service carriers that pursue a strategy of differentiating services, low-cost operators focus on reducing operating costs, thus assuming a cost leadership. Similar changes led to wide impacts on the structure of the European aviation market, a similar scenario is being witnessed in the Indian aviation sector leading to greater price rivalry. In a sector that has always been characterized by marginal cost-effectiveness, this price competition has led to dwindling profits. Today a fair number of airlines in America, Europe and Asia are stressed to make a profit or are on the verge of bankruptcy. This has led to the task of a worldwide planning of extensive consolidation activities. This ongoing price rivalry, particularly in the short-haul segment, has put air service to a formidable peril. The presence of full service carriers like Air India and TATA SIA (Vistara) in the market despite the challenges posed by low cost carriers like Indigo, Go Air, Spice Jet and Air Asia is an interesting topic.

This research aims to understand the significance of service quality, customer satisfaction and customer loyalty in India's aviation industry. First of all, this research allows one to consider the definition of quality of service and customer loyalty for an airline. Gauging the impact of service quality on customer satisfaction is an activity which is very crucial for the growth of any airline. It is always necessary to understand and satisfy the needs of customer and maintain good relations with them so that they can be transformed into

loyal customers. The present study undertaken focuses on researching into the effects of service quality on customer satisfaction level & loyalty, and a comparatively study of TATA SIA (Vistara) and Air India. This study evaluates the impact of single AIRQUAL service quality measurements in detail and builds a reliable and substantial tool to figure out the parts of a specific service characterize its quality. This study fills the void that prevails in the airline industry and provides an explicit service efficiency model for the industry. This analysis produces a complete model of hypothetical and conceptual characteristics that classifies the basic components of every system and analyzes reliable relations between the three principles of service efficiency, consumer satisfaction and customer loyalty. The data required for this study was accumulated from passengers travelling on Air India and TATA SIA (Vistara) from IGI airport Delhi. The primary data collected was analyzed through utilizing Statistical Package for the Social Sciences (SPSS) software, AMOS-24.0.

Analysis demonstrates the high accuracy of AIRQUAL metrics of airline physical properties, tangibles aspects at air terminals and employees, as well as customer loyalty. The metrics are well related and can be used to calculate airline passengers' understanding of service efficiency. For academia, business, the travel industry and the aviation industry, research is of great significance. Both airlines would benefit from the study.

TRIBUTE

This Thesis is a tribute to my loved ones who are not with me today but would have cherished to see me accomplish this:

1. Pt. Charanjit Lal Sharma – My grandfather was a philanthropist and a visionary. He followed with zeal the social essence of the Arya Samaj in the spread of education in the region. His association with various educational institutions, social organizations and academicians was an enriching experience for me. I spent my childhood and youth under his benign guidance and imbibed his values which benefitted me immensely.

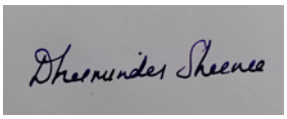
2. Smt. Gyan Devi Sharma – My grandmother, was a lady of much wisdom. She inculcated in me the values of a joint family and the joys of caring and sharing.

3. Mr. Pitambar Lall Sharma – My father was a thorough gentleman from whom I learnt the essentials of discipline and diligence. The mantra of his life was "work hard and success will follow". Efficacious and yet modest to the core, he has always been my idol.

4. Mrs. Padma Sharma – My mother whom I adore was a symbol of devotion and dedication to her family.

5. Mr. Kushal Raj Sharma – My Chachaji (Uncle) who to me was a fatherly figure, a caring elder brother and a trusted friend. I cherish his reminiscences with affection and warmth.

I invoke the blessings of my elders and loved ones before the commencement of this academic activity.



Dharminder Sharma

ACKNOWLEDGEMENTS

I sincerely acknowledge and thank the contribution of the following individuals without whose help this academic activity would have been difficult to accomplish.

1. Dr. Sandeep Walia (Associate Professor and Head of the department, Lovely Professional University Phagwara, Punjab India) - My guide who helped me accomplish this arduous academic journey. He was a constant source of inspiration to me and I benefitted immensely from his wide knowledge on the subject.

2. Dr. Amit Kumar (Associate Professor C.T University, School of Hotel Management, Airlines and Tourism Ludhiana, Punjab, India) - My co – guide he was ever helpful, guided in my academic journey and helped me accomplish my task.

3. Dr. Mohinder Chand (Professor Department of Tourism and Hotel Management Kurukshetra University Kurukshetra, Haryana, India) – My mentor, teacher during my M.B.A and academic guide he was always encouraging and helpful in my academic pursuit.

4. Mr. Ratan Tata the icon of the nation, for making the peoples car TATA NANO, the vehicle which was the mode of transport during my academic pursuit.

5. Mr. Sanjeev Chopra (Manager Business Development Taj Sats Air Catering Ltd. Delhi, India) - My immediate reporting senior was always benevolent in helping me complete my cherished aspiration.

6. Taj Sats Air Catering Ltd. Delhi, my company where I have been working for the past more than 20 yrs. and gained enriching experience in the hospitality field.

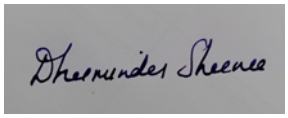
7. Mr. Raju Sehgal (Kurukshetra University) motivational speaker, environment enthusiast, social activist, – My dearest friend who is always helpful has been a source of inspiration to me in this academic pursuit.

8. Mr. Azmat Singh – My friend from Kinder Garten to this day, was supportive, enthusiastic, motivated me and prayed for my success.

9. Mr.Pushpinder Sharma – My younger brother, friend and comrade, he has been my strength in my journey of life.

10. Miss Harshita Sharma and Mr.Yash Raj Sharma- My children who are a source of joy to me and were excited to see their father's success.

11. Mrs. Neelu Sharma - My dear wife who has been a constant support to me and has been my support system and to whom I dedicate this research.



Dharminder Sharma

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Sr. No:	Description	Abbreviation
1.	Fully serviced carriers	FSC
2.	Low cost carriers	LCC
3.	Frequent fliers programme	FFP
4.	Word of mouth	WOM
5.	Directorate General of Civil Aviation	DGCA
6.	International Air Transport Association	IATA
7.	International Airports Authority of India	IAAI
8.	Airports Economic Regulatory Authority	AERA
9.	Revenue passenger kilometer	RPK
10.	Airport council international	ACI
11.	National civil aviation policy	NCAP
12.	Ude desh ka aam nagarik	UDAN
13.	Maintenance, repair, and overhaul	MRO
14.	Air turbine fuel	ATF
15.	Indira Gandhi International Airport	IGI
16.	Direct Data Solutions	DDS
17.	Department of promotion of industry and Internal trade	DPIIT
18.	Foreign Direct Investments	FDI
19.	Center for Asia Pacific Aviation	CAPA
20.	The Turkish Republic of Northern Cyprus	TRNC

21.	Principal component analysis	PCA
22.	Structural equations modelling	SEM
23	Service Quality‖ of Airline Industry	SQAI
24.	Customer Loyalty	CUL
25.	Average Variance Extracted	AVE
26.	Average Shared Variance	ASV
27.	Maximum Shared Variance	MSV
28.	Confirmatory factor analysis	CFA
29.	Analysis of variance	ANOVA
30	Unstandardized predicted values	PRE_1
31.	Studentized residuals	SRE_1
32.	Value/Variance inflation factor	VIF
33.	Leverage values	LEV_1
34.	Maximum likelihood estimation	MLE
35.	Asymptotic distribution-free estimation	ADF
36.	Goodness-of-fit	GOF
37.	Normed chi-square	CMIN/DF
38.	Root mean square error of approximation	RMSEA
39.	Comparative fit index	CFI
40.	Standard operating procedures	SOP‘S
41.	Total quality management	TQM

Chapter 1: Introduction:

Air travel requirement is firmly connected with the economic status of a nation. Aviation accounts for 65.5 million jobs worldwide and its contribution to global GDP is 2.7 trillion $.Rapid industrialization in various nations throughout the world has resulted in increased air travel requirement in the recent times (Jou, Lam, Kuo, and Chen, 2008). As indicated by Musenze and Mayende (2019) providing high quality services to travellers is crux of cut throat competition for airline's profitability along with sustained advancement in exceptionally cut throat conditions. In the current competitive scenario, the focus of most of the aviation companies is on fulfilling customer's requirement. Particularly in service sector enhancing customer satisfaction level by enhancing services quality is major area of concern. As indicated by (Mustafa et al., 2005), improving the standard of service for travellers is a crucial feature. Consequently, the requirement for airlines to remain competitive is envisaged to provide higher service efficiency (Mustafa et al., 2005). Service rivalries as well as modern traveller's expectations are identified with coordinated service quality in airline business. In the same way, service quality has increasingly been used as a strategic promotional procedure for consumers, growth, and imaginative service, and the promotion of service excellence in aviation (Andotra, Gupta, and Pooja, 2008). Earlier studies also carried out analyses of service efficiency and customer satisfaction. In addition, this definition is favoured by a variety of investigators who conclude that customer satisfaction directly affects customer loyalty. Further it has also influence on market share and profitability of an organization (Jiang & Zhang, 2016; Ekiz, Hussain & Bavik, 2006; Anderson, Fornell & Lehmann, 1994). According to (Choudhri, 2016) a customer is satisfied only when his needs and requirements are fulfilled. Chang and Jung (2017) advocate for user preferred emotions to potential passengers which will make the perceptions regarding the positive efficiency of public transit networks are more appealing. Comprehending the expectations of customers is always a significant step in providing superior services. Explicit service experiences form an opinion about the quality of services provided, thus putting forth the fact that a

satisfied customer may not necessarily be loyal. Regardless of uniformity, airline services are widely represented via client division; in addition to detailed organizational efficiency personalised services assume reliable customer feedback (Albrecht, 1992) and its variations which are being utilized by service providers thereby augmenting for competitive advantage in market. Flight preparation, ticketing costs, on-board incentives, experiences of the staff, facilities offered & ticketing methodology have not assumed crucial roles in evaluating service quality of airlines and manipulating the decision of travelers to choose an airline (Andotra et al., 2008). This is significantly necessary to see as to how travellers assess incorporated service procedures, yet in addition to evaluate basic essentials and sub measurements which helps to assess integrated service quality of airline business. To characterize as well as determine service quality is essential for air service provider (Robledo, 2001). (Park, et.al,.2004) reviews numerous airlines experience issues in utilizing an appropriate tool to assess service quality so as to properly evaluate along with enhance service performance. (Park, et.al,.2004) found , after analysing the literature, a number of studies directly linked to the determination of the perception of airline service efficiency by passengers.

According to Kim et.al (2020) there is an increase in the number of price sensitive customers/clients as it is convenient for interested potential customers to inquire about the costs of products and services offered through the web or mobile services. Those clients who are happy with the purchased items, will have an intention to rebuy along with they distribute idle talk (Nadiri et al., 2008). In like manner, service quality is seen as a significant precondition for the success and sustained presence of any organization in an ever-competitive business scenario (Gilbert and Wong, 2003). Research scholars are already examining the perception of service to a customer and to provide significant evidence of the importance of service quality, value and satisfaction in evaluating the comparative effect of service quality on consumer behaviour (Liu and Lee 2016). Different studies have just researched if service quality in common has an effect on consumer loyalty (for example Sandada and Matibiri, 2016; Jiang and Zhang, 2016) and many others have previously emphasized on AIRQUAL measurements of service quality

(Farooq et al., 2018; Nadiri et al., 2008). Some specialists have investigated dissimilarities between low cost and full-service airlines, although with various theories, for example, SERVPERF scale (Kos Koklic, Kukar-Kinney and Vegelj, 2017; Leong et al., 2015). Still not even a single research is discovered the evaluate impact of single AIRQUAL service quality measurements in detail, in view of the difference between various kinds of airlines. Therefore a reliable and important tool needs to be established to find out which parts of a particular service characterize its importance.

In their study the projected tool includes performance based measurements of the scale defined by Rentz (1996) and Brady and Cronin (2001), and Dabholkar, Thorpe Dual objectives are taken in this research particularly for airline industry:

1) To project a conceptual service quality model and

2) To verify psychometric features of projected model via building up a scale for estimating service quality.

Current research may fulfill a reasonable gap that prevails in the airlines industry via presenting a complete specific-industry model of service quality. An associated dimension signifies for a reliable and valid instrument for evaluating of service quality in airline business. The present research consequently helps in forthcoming studies by giving a basis for upcoming research with respect to perceived service quality and an applied evaluation instrument for assessing airline services quality.

1.1 Concept of Service Quality:

Service quality focuses on customers' requirements, demands with an aim to exceed upon their customers' expectations. The understanding of the quality of the service is focused on maxim that an organisation exists to serve its customers and in order to survive a highly competitive and ever changing market, it becomes imperative that the emphasis is on incessantly improving its service quality. Wang Wang and Tai (2016) commented on view of the millennials and generation Z i.e. the new generation clients who expect the

service quality from various points of view thus highlighting the importance of service quality. Customers tend to have an eye for details of the services rendered by the airlines in lieu of the price paid thus underlining the significance of maintaining the standard of services and incessantly improving upon them in the aggressively competitive market. According to Shafiq, Shafique, Din, and Cheema, (2013) Businesses, providing a higher quality of services, tend to get more satisfied and more loyal customers in contrast to their competitors. Gorondutse and Hilman (2014) harassed on the fact that the survival of a business is connected to the quality of services provided by it to its customers. Service quality levels may vary according to the product category i.e. in an airline service this depends upon the class of service opted by the passenger.

Different levels of services are provided in:

- First class
- Club class
- Business class
- Premium economy class and
- Economy class.

These varying classes also depend upon the configuration of the aircraft, which are chosen according to the requirement of a particular aircraft for the sector it is operating. This difference in service quality is also due to the price of air tickets for different class of journey selected by the passengers for travelling. This difference in the services provided in different classes of airlines makes it differential and multidimensional. The price paid for the services provided is an important factor in determining the quality of services received. If the cost paid for the services received is higher, then this would lead to a negative publicity about the product leading to a loss. The airlines resort to various marketing strategies to attract passengers to their respective airlines by offering specialized services for different sectors. The flights to Gujrat are provided with more vegetarian choice of meals due to the fact that it has primarily more vegetarian population. These choices are worked upon by past experience and preparing a matrix of

the percentage from the data of passengers collected. According to Tsafarakis et al. (2018) customers rate on-board catering and food services as the most important criteria for passenger satisfaction and consider this as the highest value for money criteria for a regular price airline.

That service quality is a significant attribute in the public as well as the private sectors, industry and services was viewed by Zahari et al., (2008), Brown & Bitner, (2007). The swift progress and competition of service quality, both in advanced and emerging economies has rendered measuring and evaluation of service quality significantly important. The evaluation of different service quality models show that the service quality outcome and measurement is dependent upon the factors such as type of settings, situations, time, and etc. factors. Added to this, even what the consumer wants from a specific service is also evolving due to factors such as time, increased familiarity with a particular service and a highly competitive scenario.

1.2 Concept of Customer Satisfaction:

Customer satisfaction is an important factor that has attracted the research scholars and industry professionals as an important area of study. This is used by service industry to enhance customer loyalty thereby having a positive effect on an organizations performance. The significance of customer satisfaction is vital for an organisation, and should be maintained as satisfied customers tend to advertise a company. According to D. Havir, (2017) due to the similarity in products and services it becomes quite imperative that the experience of passengers receiving this could make airline distinct. Khadka and Maharjan (2017) stressing the role and importance of customer satisfaction and loyalty have linked a customer to a company's success. A business organization should focus on long-term goals to incorporate customer satisfaction and loyalty through a large number of customers. According to Tao, (2014) it is not possible for a business organization to flourish if it ignores or disregards the requirements of customers. Valdani, (2009), Deng et al. (2009) emphasize that companies exist because they have a client to participate in. (Saravanan and Rao, 2007), (Wicks and Roethlein, 2009) commented on the value of

customer loyalty in today's market climate and on the willingness of the provider to offer a high quality of service by developing a close partnership with its customers to satisfy customers with product variations. Thus indicating a correlation that may exists among customer satisfaction and service quality, underlining the value of customer satisfaction in determining quality. Commitment to excellent utility, which satisfies the demands and requirements of the market and permits customers to judge the product, is the requirement of the day (Bhattacharya, 2008). Customer satisfaction is particularly significant technique to gather feedback from customers and can be utilized to improve your business (Grigoroudis & Siskos, 2010). Customer satisfaction can gauge how the company's future position will be. Customer satisfaction aids to perform a SWOT analysis and benefit by improving their business in an appropriate and systematized manner. A right decision to use the apt resources for optimum output can also be made. It also helps in maintaining the association with prevailing customers and acquiring potential new customers. The stiff competition prevailing in the Indian aviation market makes it challenging for the aviation companies to develop innovative ways and keep equilibrium between maintaining a profitable operation and satisfying passengers of a diverse and multicultural society.

1.3 Concept of Customer Loyalty:

According to Thomas and Tobe (2013) "loyalty is more profitable". The costs of maintaining an existing customer is always less than getting a new one. Loyal customers even encourage others by word of mouth (WOM) to buy a service and are even reluctant to change their minds to buy another service. Rauyruen and Miller (2007) linked customer loyalty as a merged concept of behavioral loyalty and attitudinal loyalty. Judith (2018) concluded that there are three different ways for airline customer loyalty, social, psychological and functional each of which is characterized by one of the relational advantages observed for the loyalty of airline's clients. The decision of a customer to be loyal or reflying on the same airlines varies and researchers have tried to find the reasons behind this. (Hess et al., 2007; Nako, 1992; Suzuki, 2007; Espino et al., 2008).Frequent

Fliers Programme is an important incentive offered by airlines and according to (Gomez et al., 2006). “Main role is retaining customers already showing loyalty to the company”. Features that describe an airlines fare, charges for any ticket change, free food, comfort, frequency of departures, and on time arrival/departures are a few factors have a significant impact on the choice of an airline for travelling. One of the most important ways to increase the competitiveness of the airline is to promote customer loyalty (Kumar et al., 2011; Chin, 2002; Shrestha, 2014). Natalisa and Subroto (2003) have suggested that national airlines must abide by the promises made in their advertising campaigning materials and promotional communications. The companies would not be able to fulfill the requirement of the clients, without the correct understanding and awareness about consumer behavior. It is becoming increasingly important for aviation companies to build a good and lasting relationship with its customers. Customer loyalty is also known as a tactical target for business and is a required attribute for businesses sustenance. Due to the fast changing market and the increasing demand for quality service, it is important that the airline provides outstanding services and focuses on continuous upgrading so that they provide unique services and have a competitive edge than their competitors to their customers. Customer loyalty was conceptualized as a repeated behavior based on the attitude towards a brand, driven by the preference for this brand in particular compared to competing brands that are relevant in the context of specific consumption. Directly influencing a company's profitability provides a basis for developing a sustainable competitive advantage on the market.

1.4 Subject of study:

Current research is associated with airline service quality (AIRQUAL scale) in addition to how its influence consumer loyalty and customer reliability. The purpose behind choosing this topic is to evaluate degree up to which this scale conquers shortcomings of SERVQUAL scale, especially w.r.t its appropriateness in airline business. Current study will, in this manner, add to knowledge by affirmation, evaluation and validation of (AIRQUAL) scale. It depends on second phase of validity systems, as anticipated by

Parasuraman et al. (1988). Moreover, to empirically test its quality from an alternate relevant point of view a validated scale will be adapted and implemented in Indian Context.

1.5 Problem statement:

Nearly three decades prior Parasuraman & associates developed their well-known service quality instrument, termed SERVQUAL. The scale is implemented in different businesses for different nations. Though it consist of various irregularities, As five unique assistance quality measurements projected via Parasuraman et al. (1988) is designed through several individuals because of irregularities, specialists started to incorporate as well as remove measurements in first assistance quality scale (SERVQUAL), in addition to this provided names related to business, for example projected service quality scale in aircraft industry termed as AIRQUAL (Bari et al., 2001). Scale developed as well as projected by Bari et al. (2001) in view of Cyprus market required validity, since complete vital actions were not taken for approval of an instrument. It couldn't be implemented in several countries, on opposing reasons presented via first SERVQUAL scale. To deal with this issue, this study considered to be equivalent to AIRQUAL scale along with adhered to entire means projected by Parasuraman et al. (1988) to affirm as well as approve an instrument. It signifies one of a distinctive hybrid scale, which provides an increasingly complete scholastic assessment on service quality practically speaking. The application this scale on Saudi Arabian airlines verified and validated it.

Along with this primary subject that is dealt in the current study, the positive correlation between service quality effects in aviation with respect to passenger gratification and loyalty is also thrown light upon. In the 1980’s and 1990’s numerous airlines launched the loyalty programmes with the aim of increasing profit margins and winning customer loyalty. These plans were termed as the frequent flyer programs (FFP), with a goal to compensate travellers for using flights services with a particular airline and increase loyalty. Whereas these projects caught the attention of an enormous number of clients, however it remains doubtful that the airlines really make sure consumer happiness and

loyalty. Researchers projected a number of indicators for customer happiness as well as loyalty through upgraded service excellence. It is indeed important to evaluate the relationship between service quality, passenger satisfaction & client loyalty in airline business; numbers of various alternatives that are accessible with aviation companies to guarantee repurchase by clients (e.g., FFP). This connection among service quality, consumer loyalty along with client satisfaction has not been investigated in India. The current study therefore seeks, in practice, to test and validate the hybrid AIRQUAL model and, furthermore, to build up the related impact of service quality on passenger loyalty and satisfaction in the Indian environment.

1.6 Background of the study:

The present airline industry is surrounded by competitive condition. In addition, it is an industry critical in worldwide economy since it's a basic part of tour and travel firms and imperative for global trade (Tiernan, Rhoades and Waguespack, 2008). Previously, air traffic was forcefully directed (Malver, 1998). In 1978, although, administrative plan in US was eliminated as this accepted that deregulation of air traffic probably enhance rivalry among airlines; accordingly bring about enhanced service quality and lower charges. India pursued this model and began to abolish administrative guidelines in 1992 (ibid.). Subsequently, the business penetration of new companies was not prohibited; specifically, deregulation directed towards the influx of LCC or LCA (Tiernan, Rhoades and Waguespack, 2008). In comparison to traditional full- service airline carriers (FSC's), Low cost carriers (LCC's) provide only basic services and have the option of selling tickets at lower price (Bjelicic, 2007). Its objective for every business activities is enhancing as well as lessening expenses have the option to produce an upper hand in the market (Groß and Schröder, 2007). Low cost carriers presented another item in the market as "flying has turned similar to a taxi drive – an everyday facet, moderate and available to everybody" (Bley and Büermann, 2007). Subsequently, rise of low cost carriers has brought significant changes in market framework in airline business through expanding competition among airlines. So as to increase a beneficial situation in the

market, it is essential for airlines to see how these separate from different rivals in their business condition.

It is observed that maintaining high service standards at a comparatively low price are the two especially significant parts for traveller (Loureiro and Fialho, 2017). This research concentrates on first part, specifically service standards which are needed to fulfil requirements of airlines travellers, as in recent times, traveller's attentiveness and curiosity for quality of services has enhanced (Chou et al., 2011). Right now, it isn't just significant to evaluate how service quality in common influences satisfaction of travellers, moreover if it is seen as an alternate manner between lower cost and full-service airlines. Various sorts of airlines firm's plans emphasize on various procedures to draw attention of their clients (Tiernan, Rhoades and Waguespack, 2008). Whereas LCCs basically emphasize price-leadership, Full-Service Carriers perform a full-service separation procedure (ibid.). Therefore, it is anticipated that the different aspects in which the standard of services is seen contrasts among LCC and FSC travellers.

Due to enhanced significance for service quality in recent years, a key issue that analysts as well as administrators need to confront has risen to top, which is determination of service quality. Parasuraman, Zeithaml and Berry (1988) built up "SERVQUAL" scale, which consists of Twenty-Two-items/dimensions that determines contrast among consumer's expectations and their view on presented services and incorporates five measurements: physicals assets, reliability, responsiveness, confirmation & sympathy (ibid.). For including Customers' desires has been disapproved; consequently, SERVPERF technique is developed and its focused upon the buyer's activities (Ekiz, Hussain and Bavik, 2006). Adjusting this to aviation business, "AIRQUAL" scale was designed to adjust to the airline industry including five measurements aircraft physical assets, terminal effects, workforce, sympathy and picture (ibid.). To determine service quality in present research work, AIRQUAL scale will be applied is not enough due to fact that it incorporates industry- particular things, moreover it has not recognized much because of its latest emergence.

1.7 Research questions:

1. State key elements that represent airline service quality (AIRQUAL) after validation?
2. How airline service quality influences client satisfaction?
3. Discuss the impact the standard of airline service has on attitudinal loyalty?
4. Discuss the impact of customer satisfaction on the same airline's reflying intentions.

1.8 Significance of the Research:

The forthcoming commitment of this research can be outlined in relation to below mentioned factors "It reviews related literature to describe and propose a sound knowledge of service quality by considering major quality aspects which might affect airline consumer's satisfaction and loyalty. The theoretical part occurs from an effort to incorporate service quality, consumer satisfaction along with consumer loyalty in airlines industry, while literature reveals an opposing observation about association among service quality and consumer satisfaction. The study builds up a theoretical as well as conceptual model which recognizes fundamental components of every construct and analyzes probable causal connections among three concepts dependent on conversation and survey of related studies in consumer satisfaction, service quality and loyalty writing. While significantly the current research is aimed to recognize principle elements of service quality along with connections between quality and both traveller satisfaction and loyalty, investigation reveals likewise an extensive estimation to distinguish loyalty factors. Different perspectives will likewise be talked about, for example, the impact of travellers' attributes on their assessment of service quality, level of satisfaction and loyalty level. Additionally various division ways to deal with distinguish airline traveller market will be inspected.

The importance of the research work is to facilitate and verifies experimentally presence of these various connections among three ideas: service quality, traveller satisfaction and loyalty. "Research tests and decides fundamental factors which distinguish airline service quality and traveller loyalty lastly, it tries to explain travellers travel conduct through

evaluating the three ideas in writing of marketing and conduct. With this evaluation, marketing promoting ideas will be researched like: socio-economic demographic factors, traveller division dependent on loyalty level, psychographic attributes, nationality as well as reason for tours lastly impact of various psychographic attributes on traveller assessment to quality and their level of loyalty.

This study is of distinctive importance to Airlines flying in India for domestic travellers. It deals with an issue that has never been tended to by the Airline Industry in India previously. It is foreseen that the consequences of this research will be particularly helpful to TATA SIA (Vistara) and Air India, as they are presently developing their business and creating of new marketing and administrative techniques as a major aspect of this procedure.

1.9 The airlines selected for study:

The airlines selected for study are Air India and TATA SIA (Vistara). These are the only two FSC (Full Service Carriers) airlines operating in India currently.

Air India is a government of India owned flagship carrier of India and is owned by Air India Limited. It has its head office located at Delhi. It connects 102 domestic and international destinations. Air India connects 60 international destinations and has a market share of 18.6%.Currently Air India is up for sale, but has not been sold.

Tata SIA Airlines (Vistara) is a full-service airline, having its hub at IGI airport (Indira Gandhi International Airport) New Delhi. It commenced operations in 2016; it is connected to 59 domestic destinations and 6 international destinations. TATA SIA (Vistara) has a market share of 4.7% and is the sixth largest airline in India.

1.10 Aim of the study:

The focus of this study is on revaluation of AIRQUAL scale for assessing quality of service, satisfaction of the customers and loyalty particularly in the case of airline

organisations. The study focuses on the survival of fully serviced carriers (FSC) in the competitive environment and the threat posed by low cost carriers (LCC), regional airlines, hybrid airlines and a comparative study of two only FSC's operating in India. TATA SIA (Vistara) and Air India are the only two FSC's operating in India. The study of the oldest surviving airlines in India and a comparative new entrant airline in the fast paced aviation sector is an interesting study.

1.11 Objectives:

The fundamental objectives of the present research are to study and investigate the effect of "service quality" and "customer satisfaction" on "customer loyalty" of passengers traveling on board the fully serviced TATA SIA (Vistara) and Air India airlines, from IGI airport at Delhi to other destinations and also to perform a comparative study between these two airlines.

The main Objectives for undertaking present research are mentioned below:

1. To identify the importance of factors that constitutes service quality of airline industry in context to fully serviced airlines.

2. To analyse and compare the relationship between service quality, customer satisfaction and customer loyalty.

3. To analyse and compare the conceptual model in context of customer travelling preferences on TATA SIA (Vistara) and Air India.

4. To evaluate the impact of customers' demographics (Income, Profession, Age) on the relationship of service quality of airline industry and their loyalty towards airline industry.

The objectives received after the plagiarism free report.

The Focus of the present study is at studying “impact of service quality” on “customer loyalty” of airline industry which further explored mediation effect of “customer satisfaction” and “customer loyalty” in relation to “service quality” of airline industry. In addition to, study aims at the moderation effect of customer’s income, their profession and their age as well.

1.12 Hypotheses:

The following hypothesis haven been formulated for the current study and are mentioned below:

H1: Problem solving quality leads Airline Industry to have better Service Quality.

H2: Expertise quality leads Airline Industry to have better Service Quality.

H3: Conduct quality leads Airline Industry to have better Service Quality.

H4: Cleanliness quality leads Airline Industry to have better Service Quality.

H5: Comfort quality leads Airline Industry to have better Service Quality.

H6: Tangibles quality leads Airline Industry to have better Service Quality.

H7: Safety & Security quality leads Airline Industry to have better Service Quality.

H8: Valence quality leads Airline Industry to have better Service Quality.

H9: Convenience quality leads Airline Industry to have better Service Quality.

H10: Service quality of Airline Industry has significant effect on customer satisfaction.

H111-a: Customer satisfaction has significant effect on customer loyalty in aviation industry.

H11-b: Customer satisfaction mediates the relationship between Service quality of Airline Industry and customer loyalty.

H12: Service quality of Airline Industry has a significant indirect effect on customers' loyalty in the presence of customer satisfaction.

Moderation of Customers' Demographic on the conceptual model:

H13: Age of the customers' moderate the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H14: The professions of customers' moderate the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H15: The incomes of customers' moderate the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

1.13 Research Strategy and Methodology:

Descriptive analytical approach has been used for research. Study aims at analysing "Service Quality" impact on "Customer Loyalty" in Airline Industry. For research, data is collected through primary sources with the help of structured questionnaire from a predefined respondents group selected by the researcher from particular population understudy. After that is evaluated using of SPSS software, AMOS-24.0 & Process (A. Hayes, 2013). Secondary data is collected through books, magazines, journals, newspaper articles, reports, periodicals and websites.

1.14 Data Collection Methods:

To carry out research objectives, required data was collected through following two sources:

1. Secondary Data: Data is collected from both published as well as unpublished sources like journals, essays, magazines, reports, published papers, dissertations, books, websites, and other related available literature.

2. Primary Data*:* tools used here were questionnaire, structured interview, focus group interview and in depth interview.

1.15 Contributions to knowledge:

Research work conducted in this study has provided many advantages for research in modern service quality. First, it tries to measure as well as validate AIRQUAL scale, based on SERVQUAL scale and it is necessary to validate because the main founders of AIRQUAL scale, (Bari et al., 2001), had never fulfilled entire actions which were necessary to validate it. Second, it was empirically verified in Saudi Arabia airline industry. It was exceptional that this was firstly implemented in Saudi Arabian context. Third, it is also verified to assess its effect be benefit equally the policy-makers as well as experts of aviation industry in particular and hospitality & service industry in general. Moreover it also restates connection among quality and loyalty, providing suggestions for strategic forthcoming planning of management in industry. Finally research work additionally contributes to service quality literature by increasing insights in determined dimensions, which might be proposed by airlines to enhance service quality, which leads to enhance customer satisfaction as well as loyalty.

1.16 Structure of the thesis:

The research work is divided into seven chapters:

- The first chapter provides about the introduction of the study and field. It gives an overview of the topic and also addresses the intent of selecting this field for study. The study incorporates the principles of service efficiency, customer satisfaction and customer loyalty. Research questions are answered, the problem statement under consideration, the importance of this research and a brief account of the airlines chosen for the study are clarified. Purposes, goals, study hypothesis established.

- Second chapter gives an introduction to the aviation industry in India. The different business models and airlines operating in India. The current status of Indian aviation and challenges faced by the Indian aviation industry are discussed. The details of airlines operating in India with a thorough account of the chosen airlines of study i.e. Air India and TATA SIA (Vistara) are discussed in this section.

- Third chapter discusses the literature on "service quality", "customer satisfaction" and "customer loyalty". Expectancy disconfirmation theory is explained here. The relationship between quality of service, "customer satisfaction" and "customer loyalty" is clarified. The expansion of the "AIRQUAL model' is also discussed in the chapter.

- The "AIRQUAL model", the construction of the conceptual model, the formation of hypothesis study and the moderation of customer's demographics of customers on the conceptual model are explained in detail in the fourth chapter..

- Fifth chapter throws light on elements of research methodology. The research strategy and procedures are discussed. The data collected, the sources used in current research work, data analysis validation, descriptive and inferential data analysis, testing of confirmatory model, structural model and the testing of hypothesis is explained here. .

- Sixth chapter addresses the presentation and interpretation of data and informative study findings. Further the data cleaning, validity issues, problems, review and comparison of relationship between "service quality", "customer satisfaction" and "customer loyalty" among TATA SIA (Vistara) and Air India is discussed. There is also an overview of different tables depicting relationships.

- Seventh chapter explains the findings of study, its practical implications, knowledge contribution for professionals and policy makers' recommendations for directions for further future research and conclusion is described.

Chapter 2: Aviation Industry in India

2.1 A brief history:

The inception of aviation in India dates back to the pre-independence era which started with an inaugural airmail service flight dating back to 1911 covering a distance of 10km from Allahabad to Naini. The first international flight by Imperial Airways to India covered a route; London – Karachi – Delhi in 1912.The civil aviation department was set up in 1927.The Government promulgated in 1934 the Indian aircraft act and in 1937 formulated it. Tata Airlines was named Air India in 1946. The air corporation act was passed in the year1953 resulting the formation and setup of Indian Airlines and Air India further nationalising aviation industry with the merger of following eight private airlines:

These eight private airlines were namely Kalinga Airlines, Bharat Airways, Deccan Airways, Himalayan Aviation, Air India, Indian national Airways, Airways India and Air Services of India.

The National Airports Authority was created and formed in the year 1986. In the year 1994, Air Corporation Act was repealed and private airlines and other players were granted licenses to start and operate the scheduled domestic airline services in the country. The companies which were granted the licenses for domestic aviation operations were East West airlines, Jet airways, NEPC Airlines, Air Sahara, Damania airways and Mod Luft.

From 2004 Indian Scheduled carriers having 20 aircrafts and with 5 years of continuous flight operations were granted permission to operate scheduled services to international destinations.

The year 2007 also witnessed the announcement of Regional Airlines Policy which facilitated for granting of licenses for operating aviation operations within specific areas. With 82 airports in operation, 735 aircrafts, 12 planned operating air companies and 121 operators in the non-scheduled category India at present holds the rank of being 9th

largest market in aviation business globally. It is estimated that the number of air passengers traveling in India will exceed 50 million this year. Domestic Indian passenger traffic amounted to 293.99 million and international passengers to 58.55 million.

The domestic sector of Indian aviation industry is extremely competitive, has shown a considerable growth and is poised to be the third largest air travel market by 2024. A highly competitive pricing is vital for sustenance of this industry. According to (Tyagi and Nauriyal, 2016) aviation companies have to device new strategies to maintain profit margins.

The following table explains the growth of aviation industry in India:

Table 2.1: Growth of aviation industry in India

Year	History - aviation industry in India
1934	Indian aircraft act promulgated
1937	Indian aircraft act formulated
1945	Deccan Airways founded.
1946	Air India founded (Tata Airlines name changed to Air India).
1948	With the name Air India International Ltd, Air India started international operations.
1953	"Air Corporations Act" was passed, Formation and Set up of Indian Airlines & Air India International took place Airline industry nationalized and the airline companies like "Deccan Airways", "Airways India", "Bharat Airways", "Himalyan Aviation", "Kalinga Air Lines", "Indian National Airways", "Air India", and "Air Services of India" got nationalized.
1972	"International Airports Authority of India" (IAAI) was constituted
1981	"Vayudoot" started operations (Govt. of India took over the airline companies)

1986	The National Airports Authority constituted.
1990 - 91	The Air Taxi Scheme was launched and private airlines started charter and non-scheduled operations. The first private aviation company East West Airlines started operations.
1994	"Air Corporation Act" was repealed. Scheduled services started operating by private players. "Jet Airways", "Air Sahara", "Modiluft", "Damania Airways", "NEPC Airlines" and "East West Airlines" were given permission to commence domestic operations in the country.
1995	The "Airport Authority of India" (AAI) was constituted with the merger of the "International Airport Authority of India" with "National Airports Authority".
2003	The low-cost carrier Air Deccan commenced its operations.
2004	The Scheduled air carriers having at least a fleet of 20aircrafts and minimum of 5 years of flight operations, given permission to commence international operations.
2007	Regional Airlines Policy granted licenses for starting operations for specific regions.
2007	The merger of Air India & Indian Airlines took place
2009	Airports Economic Regulatory Authority (AERA) was set up
Year	History - aviation industry in India
1934	Indian aircraft act promulgated
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1945	Deccan Airways founded.
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1972	"International Airports Authority of India" (IAAI) was constituted
1981	"Vayudoot" started operations (Govt. of India took over the airline companies)
1986	The National Airports Authority constituted.
1990 - 91	The Air Taxi Scheme was launched and private airlines started charter and non-scheduled operations. The first private aviation company East West Airlines started operations.
1994	"Air Corporation Act" was repealed. Scheduled services started operating by private players. "Jet Airways", "Air Sahara", "Modiluft", "Damania Airways", "NEPC Airlines" and "East West Airlines" were given permission to commence domestic operations in the country.
1995	The "Airport Authority of India" (AAI) was constituted with the merger of the "International Airport Authority of India" with "National Airports Authority".
2003	The low-cost carrier Air Deccan commenced its operations.
2004	The Scheduled air carriers having at least a fleet of 20aircrafts and minimum of 5 years of flight operations, given permission to commence international operations.
2007	Regional Airlines Policy granted licenses for starting operations for specific regions.
2007	The merger of Air India & Indian Airlines took place
2009	Airports Economic Regulatory Authority (AERA) was set up

The market share of domestic airlines as per the statistics revealed by DGCA in 2019 operating in India is as follows:

Table 2.2: Market Share of Domestic airlines in India:

Domestic airlines in India - 2019		
S.No	Airlines	Market Share
1	Indigo	43%
2	Spice Jet	13%
3	Jet Airways	12%
4	Air Asia	11%
5	Air India	11%
6	Go Air	9%
7	TATA SIA (Vistara)	4%
8	Jet Lite	2%
9	Alliance Air	1.10%
10	Truejet	0.50%
11	Air India Express	0.10%
12	Others	0.02%

Source: http://www.dgca.nic.in/reports/rep-ind.htm

2.2 Business models in the airline industry

A business model decides the manner in which the company intends to do business. Five general business models are recognized in the air transport sector used by airlines around the globe. However airlines tend to add or reduce facilities according to their requirement or to move ahead of their competitors.

(1) Network airlines / FSC (Full-service carriers),
(2) Low-cost carriers / airlines (LCC),
(3) Charter airlines
(4) Regional airlines.

(5) Cargo airlines and
(6) Hybrid airlines

As the main operating business models in the international aviation industry are network airlines and low-cost airlines, these two models are continuously changing with the potential for further development.

2.2.1 Network airlines / Full service carriers (FSC):

The network is the former national air carriers that have been privatised to a certain extent over a period of time. The network operators are, above all, characterized by a vast network of international connections with an intricate hub-and-spoke system with short - range and long-range sectors. These network operators have mostly evolved from the previously state owned flag operators. These airlines followed the conventional all-inclusive service differentiation approach. The different set of classes, seats; the consistent services during flight, whether before the flight during the course of flight and after the flight work as a means of distinction which further enable the selection of more customer subdivisions. Offering loyalty enhancing programs, such as frequent flyer programs (FFP) and belonging to one of the three main airline alliances complements the strategy of differentiating network or full service operators. However, the profitability of network operators in short-distance sectors has been significantly weakened by the network expansion of low-cost airlines and their direct bearing on the prices. The aviation experts claim that the future business model of the main network operators will be based only on a long distance extended network supported by strategic business partnerships to provide a world-wide spread and equally supported by a short distance but well-connected domestic network.

Income drivers for Network airlines

1) Reputation provides services to corporate and government users.
2) Good connection of flights providing network from small to big cities for long haul journeys.

3) Provides services like on-board meals and no baggage charges and all inclusive in the main ticket.
4) Provides lounge services for business and first class travellers.
5) Diversified fares, starting with almost low cost “last minute” or “first minute” charges and ending with an expensive business class and first class travel.
6) Loyalty programmes offering rewards to frequent travellers with an aim of maximizing network revenues.
7) Slow changing timetables; offer passengers the convenience to board the next connecting flights.

2.2.2 Low cost airlines:

The low cost airlines are built on the maxim that price sells and reducing costs to the minimum and offering the lowest fare to the passenger. The low cost carriers spend considerably on advertisement campaigns. These low cost carriers do not provide the expected benefits but the passengers have to pay for them.

Income drivers for Low cost airlines

1) Inflight meals, beverages are sold at a price and thus add to revenue.

2) Free seating system is followed; thereby the first passenger can get the seat of his choice. This helps in saving reservation costs.

3) No baggage policy or a very limited baggage is allowed. Additional baggage is charged.

4) Monotype fleet saves costs on maintenance

5) Offers point to point connection, this saves costs associated penalties for delays or missed connecting flights.

6) Saves costs on landing fees charged by regional airports due to volume of passengers forwarded.

2.2.3 Charter Airlines:

Charter airlines do not sell individual tickets and have contracts with travel agencies and tour operators to a given destinations throughout the year. These are utilized by tour operators for group bookings to tourist destinations. These travel agencies and tour operators ensure a regular supply of passengers to fulfil the requirement.

Income drivers for Charter airlines

1) Saves on marketing, reservation and direct sales costs.
2) Secured cash flow as agreements are signed before the starting of the fiscal year.
3) The charters often use the low cost techniques such as no meals on board and payment for additional luggage.

2.2.4 Regional airlines:

Regional airlines transport passengers from regional airports to large airports and between these airports.

Income drivers for Regional airlines

1) Fast means of transport in the areas where transport means are difficult, costly, and troublesome or a mix of these.
2) Subsidies offered by the government on these routes.
3) Providing a feeder service to hubs for long haul flights.
4) Lesser operating costs due to use of small aircrafts.

2.2.5 Cargo airlines:

These airlines provide service by transporting goods to different destinations. Cargo airlines are dedicated to transport of goods and cargo by air. Some cargo airlines are divisions or affiliates of leading network airlines. Many international brands like Lufthansa, Saudi Arabian airlines, Malaysian Airlines have their dedicated air cargo

divisions. In India cargo flights are operated by DHL worldwide couriers and Blue Dart courier services. These generally operate in the night and save costs associated with transport of people. In the year 2018 aviation cargo traffic represented 262,333 million tonne-kilometres with a load factor of 49.3%, a dedicated cargo movement of 52.1%, and a mixed operation of 47.9%.

2.2.6 Hybrid airlines:

A hybrid airline is the one which operates at a low cost business model but offer a service standard that is quite similar to standard and legacy carriers. The hybrid airline includes legacy airlines moving goods, operating their own dedicated low cost carrier service or having tactical business agreement with regional carriers. This includes point-to-point routes and seat-only business over the internet.

2.3 Current Status of Indian Aviation:

Aviation is an industry that is complex, unpredictable and dynamic. In terms of domestic tickets sale India holds the rank of being third largest emerging market in the world. The growth is reflected by the fact that the revenue passenger kilometre (RPK) in the domestic market saw a growth of 18.6% in the year 2018 which was three times international growth of 6.5%. This growth is catered by 5 Indian airline companies and 86 foreign airlines. By 2027 a requirement of 1100 aircrafts is projected, which is expected to be 1,750 by 2037. This emerging market is expected to cater 520 million passengers by 2037. Airport council international (ACI) in its traffic forecasts (2017 – 2040) has projected that India's position is second in terms of a country in the world in its standings of passenger traffic. This growth is supported by the government by a permitting up to 100% of FDI foreign direct investment in non-scheduled air transport services. The National civil aviation policy (NCAP – 2016) focuses on making flying accessible to the masses and has launched schemes like Ude desh ka aam nagarik (UDAN) – a regional airport development and connectivity scheme. The NCAP also addresses issues like the MRO (maintenance, repair, and overhaul) a key segment for the growth of civil aviation. The refurbishing of aviation policies to encourage domestic,

international participation and public private partnership will unfold the tremendous potential. In order to become the world's third largest aviation market by 2025, India should concentrate on the growth of infrastructure and aviation policies that give priority to service quality, cost and passenger interest.

However, the aviation growth received a major setback during the COVID lock down and is still in the red. The Ministry of civil aviation (MCA) has permitted domestic airlines to operate 60% of their capacity utilisation limit. The "International Air Transport Association" (IATA) estimated that aviation industry globally is staring at a loss of $84.3 billion, with the financial viability of many airlines coming into question. According to the IATA, the July 2020 (global air passenger) traffic was 79.8% below 2019 levels, while international traffic was 91.9% below 2019 levels.

2.3.1 Challenges faced by Indian aviation industry:

The aviation industry is confronted by several challenges that threaten the very survival of airlines. A number of airlines have quit the race as they could not survive the onslaught of financial losses. Modi – Luft, Damania Airways, Air Sahara, Deccan Aviation, King Fisher and the most recently shutdown Jet Airways are examples of airlines quitting the industry after accumulating heavy losses. The few reasons behind this debacle despite a projected growth are:

1) Price of air turbine fuel (ATF): ATF forms a major constituent cost factor in the operation of airlines and accounts for 45% of the total operational costs in India. This is due to the fact that sales tax of 25 – 30% is levied by the states. This in the international market it accounts for only 34% of the operational costs.
2) High airport tax: The airport taxes in India are high compared to neighbouring countries like Sri Lanka making it more lucrative for international airlines to prefer that destination over India. The Airport Economic Regulatory Authority (AREA) hiked the charges of IGI Airport Delhi by 346%, thus rendering it among the world's most expensive airport.

3) Service tax: The service tax levied on tickets for use of ancillary services like ticketing, aircraft maintenance, ground handling and catering account for 12.36%.This increases the operating costs.
4) Advent of alternatives: Railways is posing a serious competition in terms of financial gains, quality of service, reducing travel time which has had its effect on air travel.
5) Virtual communication: Advancement in technology has a negative effect on requirement of air travel. The recent Covid has opened a plethora of opportunities for communication which has its effect on the need to travel for business and corporate professionals.
6) Stiff competition: Stiff business rivalry amongst airlines is beneficial to the customers but has made the industry highly price sensitive. The tendency to lure results into price wars in the industry.
7) Flight Delays; The delay besides accumulating financial losses is a major deterrent to passengers due to the time losses suffered.

The above requires a firm commitment from the government agencies to reduce taxes and to improve infrastructure.

2.4 Company Profiles;

A number of airlines are operating in India at present both in the domestic and international destinations. TATA SIA (Vistara) and Air India are the two full service airlines operating in India. The major low cost airlines include IndiGo, Go Air, SpiceJet and Air Asia India.

2.4.1 Indigo:

Operating with the largest fleet of aircrafts in India Indigo stands first among one of the "low-cost airlines" operating in terms of passenger transported. In July – 2020 its market share stood at 60.4%. With a daily connection of 1500 flights to 87 sectors that include –

63 domestic and 24 internationals, it remains the sixth largest low-cost airline in Asia. It has a hub at IGI airport Delhi and is headquartered in Gurugram, in Haryana.

2.4.2 Go Air:

Go Air is a Mumbai based low cost private all economy airline owned by the Wadia group. Having an operational fleet of 55 aircrafts and a passenger market share of 8.4%, it is the fifth largest airline in India .As on March – 2020 Go Air operated 330 daily departures to 36 destinations (26 domestic, 9 international).Mumbai, Delhi, Bengaluru, Kolkata and Kanpur are the four hubs of Go Air.

2.4.3 Spice Jet:

Spice Jet with a fleet of 117 aircrafts is positioned second in terms of its size the domestic travellers flown. Its market share stood at 13.6% as on March – 2019.It has 630 daily operational departures to 64 destinations (5 domestic, 15 international).It has hubs at Delhi and Hyderabad.

2.4.4 Air Asia India:

Air Asia India is a strategic partnership airline with Tata's stake at 51% and Air Asia with an investment of 49% stakes respectively. Headquartered at Bengaluru and Chennai the airline has a fleet of 30 aircrafts. On December 2019, Air Asia India ranked as the 5th largest carrier in India, after IndiGo, SpiceJet, Air India and Go Air, Its market share stood at 7.0%.

2.4.5 Air India;

Air India the national flag carrier airline of India currently operating a fleet of 172 aircrafts is Government owned airline with head office at Delhi. Air India is having base at "Indira Gandhi International Airport" (IGI), New Delhi and also in other cities across the country. It connects 96 destinations within India and 60 destinations abroad. Air India

is positioned third in number with a domestic share of 13.5% and 18.6% international market share in the aviation business.

J. R. D. Tata the father of India aviation founded the Tata Airlines in 1932. It was made a public limited company after the Second World War and named Air India. The first domestic flight of Air India travelled from Bombay to Trivandrum. The airline was nationalized its ownership passed to the Government of India after independence with 49% of the shares. The first international flight by Air India travelled from Bombay to London in 1948. The Air Corporations Act was passed in 1953 and the Government of India acquired a majority interest, while J. R. D. Tata remained its chairman until 1977. The name was changed to "Air India International Limited" and domestic operations of air services were shifted to Indian Airlines. A low-cost affiliate of Air India, Air India Express was founded in 2004 for connecting prominent cities within Country, Middle East & with South-East Asia. It was till 2007 that Air India operated on international sectors with Indian Airlines operating on the domestic sectors and SAARC nation routes. Air India incurred financial losses with its merger with the Indian Airlines. In 2014 Air India became a member of Star Alliance. Air India is connected to 94 destinations, 54 domestic and 40 international in 28 nations across four continents around the globe. Air India also offers business class passengers lounge services at several airports, where passengers can relax before they board their flight and enjoy a variety of food and drinks. The Indian government announced the privatization of "Air India" on 28th July 2017 and formed a committee to start the process. During the COVID -19 phase services were rendered by Air India in operating a number of evacuation flights to uplift Indian passengers stranded in different countries around the globe.

2.4.5.1 Fleet Size:

Air India besides its domestic operations connects to major cities of Asia, Middle East, Europe, Africa, America, Canada, and Australia. It has aircrafts with a variety of configurations which are utilized as per the requirement of the route and quality of service to be provided. These include Boeing 777-200LR, Boeing 747-400, Boeing 777-

300ER, Airbus A320-214-CEO, Airbus A320-214 CEO (Single configuration), Airbus A320-251 NEO, Airbus A321, A319, Airbus A319 (Mixed Configuration), ATR 42-320, ATR72-600 are the aircraft operated by the airline. The numbers and types of aircrafts operated by Air India are as shown in table 2.2.

Table 2.3: Air India fleet:

Aircraft	**In service**
B777-200LR	3
Boeing B747-400	4
Boeing B777-300 ER	15
B787-800	2
Airbus A320	1
A320-214-CEO	4
A320-214	5
A320-251 NEO	27
Airbus A321	20
A319 aircraft	19
A319 (Single Configuration)	3

2.4.5.2On Board services:

Air India being a fully serviced airline offers three classes of travelling experience and provides services as per the chosen class for travelling. These classes are as follows:

1) First Class
2) Executive Class / Business Class
3) Economy Class

The First class and Business provides a state of art travelling experience, spacious cabins, exquisite food vegetarian and non – vegetarian, special request meals with complementary alcoholic beverages, exclusive check in and lounge facilities, on board shopping experiences like the Sky shop. The economy class provides a comfortable travelling experience with facilities scaled down.

2.4.5.3 Ground Services:

Air India offers a range of check in options to its passengers for both domestic and international travel. Web services can be used by logging on to www.airindia.in. 48 hours prior to departure and closes two hours before departure. For web check-in, passengers can visit https://icheck.sita.aero/iCheckWebAI/. E services are available and can be availed either by using their E ticket number/booking reference or by simply entering the frequent flyer number on the link. The city check in options is available in Delhi at Delhi Metro Rail Corporations (DMRC) Airport Express Metro Stations – New Delhi and Shivaji Stadium Metro station. Check-in at kiosks machines installed at major airports or passengers can simply use mobile check-in via the Air India Mobile App. Tele check in facility is available to Frequent Flyer Members and Executive Class Passengers without check-in baggage can use this facility from six metro airports – Delhi, Mumbai, Kolkata, Chennai, Hyderabad and Bengaluru. Baggage check in services are provided which vary from frequent fliers to the class of journey opted to travel by the passengers.

2.4.5.4 Star Alliance Member:

Star Alliance with its office located at Frankfurt in Germany was founded in 1997 is the world's dominant global aviation alliance of airlines in the world. It became the biggest of the three global relationships in 2018 with a passenger count of 762.27 million became the largest of the three global alliances. "The Way the Earth Connects" is its motto.

"Air India" is a "star alliance member" and having its relationships along with the following aviation companies/ airlines of the world:

Table 2.4: Star Alliance Members

Star Alliance Members		
S.No	Airlines	Countries
1	Adria Airways	Slovenia
2	ANA (All Nippon Airways)	Japan
3	Brussels Airways	Belgium
4	Croatia Airlines	Croatia
5	EVA Air	Taiwan
6	LOT Polish Airlines	Poland
7	Scandinavian Airlines	Denmark
8	Avianca Brasil	Brazil
9	Austrian	Austria
10	United Airlines	USA
11	TAP Portugal	Portugal
12	Turkish Airlines	Turkey
13	EGYPT AIR	Egypt
14	THAI	Thailand
15	Air Canada	Canada
16	Ethiopian Airlines	Ethiopia
17	Singapore Airlines	Singapore
18	SWISS Air	Switzerland
19	Asiana Airlines	South Korea
20	Shenzhen Airlines	China
21	Air China	China
22	Avianca	Colombia
23	Aegean Airlines	Greece
24	Copa Airlines	Panama
25	Air New Zealand	New Zealand
26	South African Airways	South Africa
27	Lufthansa	Germany

Source: Compiled by the Researcher

The aim is connectivity, collaboration, creating and managing products and services beneficial to the passengers.

2.4.5.5 Service schemes and offers:

Air India offers various service offers to its clients like

1) Corporate house: Air India provides special incentives to its corporate clients depending on their travel volume and assigns dedicated sales persons for facilitation services for group movements, conferences, meets in India or abroad.

2) Group bookings: Air India has appointed group booking coordinators for the region facilitate group travel.

3) Maharaja e – Super Saver Scheme: Air India introduced the Maharajah e-Super Saver for domestic passengers that provide super price, super flexibility, super availability, and super benefits with a super network of flights. Passengers have to utilize the entire Maharajah e- Super Saver ticket on the Air India operated domestic flights within the validity of the ticket.

4) Flying Returns: India's initial frequent flyer system is flying returns. Passengers can earn FR points eligible fare paying flights fly not only on Air India but also to its 27 Star partners and passengers can also reclaim them more easily than other services for travel awards. Higher fares are also available, such as full fare economy and FR points for Business/First Class incentives and FR point also clocks quickly.

5) International flyer schemes such as early upgrades, secure upgrades, students schemes, free companion scheme and Gulf and Middle East.

6) Domestic flier’s schemes: Upgrading services at the airport, special schemes, and upgrading domestic service for sure, companion scheme, concessionary fare for gallantry award winners from the nation’s armed forces. Medical grounds, senior citizens and other suitable or necessary compassionate grounds.

2.4.6 TATA SIA (Vistara)

Tata SIA (Vistara) is a private ltd. airline operating from Indira Gandhi International (IGI) Delhi Airport and with its headquarters at Gurugram. The airline is a jointly owned by Tata Sons and Singapore Airlines, and started its operations in India on January 9, 2015 when it took its first flight from New Delhi to Mumbai. By June – 2016 Vistara has transported over two million passengers and, in May - 2019 had a market share of 4.7%, making it the sixth national airline. The airline started its international operations with Delhi – Singapore flight August - 2019.

The airline is connected to thirty four destinations. Vistara is the first airline to initiate premium economy class on domestic routes in India. Since its inception, the first month of its activity, Vistara has consistently obtained record of very high performances (OTP) of over 90%, the highest among the national operators in India. Vistara holds a 2% share in the national market of operators in February - 2016. It has 454 weekly departures from 22 destinations throughout India. The average clientele leaving Delhi is 10370 and the daily departures are 48.

2.4.6.1 Fleet Size:

Table 2.5: Vistara Fleet

Aircrafts	In service	Configuration			Total
		J	S	Y	Seats
Airbus A - 320-200	13	8	24	126	158
Airbus A - 320neo	20	8	24	126	158
Airbus A - 321neo	1	12	24	152	188
Boeing 737-800	7	12	—	156	168
Boeing 787-9	2	30	21	248	299

2.4.6.2 Agreements (Code sharing and Interline):

Vistara has a code sharing agreement that enables to publish and market the same flights under their own airline designator and number, as a part of their published schedule. The code sharing with airlines include:

Table 2.6: TATA SIA (Vistara) code sharing

TATA SIA (Vistara) code sharing		
S.No	Airlines	Countries
1	British Air	England
2	Japan Airlines	Japan
3	Lufthansa	Germany
4	Silk Air	Singapore
5	Singapore Airlines	Singapore
6	United Airlines	USA

Source: Compiled by the Researcher

Vistara has interline agreements that enable it to handle passengers travelling on itineraries that require multiple flights from different airlines. The interline agreement with airlines include the following:

Table 2.7: TATA SIA (Vistara) interline sharing

TATA SIA (Vistara) interline sharing		
S.No	Airlines	Countries
1	Aeroflot	Russia
2	Air France	France
3	All Nippon Airways	Japan
4	Asiana Airlines	South Korea
5	British Airways	England
6	Emirates	U.A.E
7	Ethiopian Airlines	Ethiopia
8	Finair	Finland
9	fly Dubai	U.A.E
10	Gulf Air	Bahrain
11	Japan Airlines	Japan
12	Kenya Airways	Kenya
13	Qatar Airways	Qatar
14	Silk Air	Singapore
15	Singapore Airlines	Singapore
16	Turkish Airlines	Turkey
17	United Airlines	U.S.A

Source: Compiled by the Researcher

2.4.6.3 On Board Services:

TATA SIA (Vistara) being a fully serviced airline offers three classes of travelling experience and provides services as per the chosen class for travelling. These classes are as follows:

1) Business Class
2) Premium Economy Class
3) Economy Class

Vistara aircrafts have eight seats, two rows; in the business class in a two each configuration. It is the first airline to offer a premium economy class services in the domestic sector in India. The premium economy class has 24 seats with more amenities than the economy class. The economy class is equipped with an exclusive HD entertainment monitor, adjustable headsets and power charger USB outlets. Vistara offers I – Fi inflight entertainment system that enables travellers to use hand held devices. The live location map enables passengers to monitor their aircraft as it flies. To satiate the taste buds Vistara offers exquisite meal uplifts in these classes of journey and provides special request meals as per the dietary requirement if requested according to the stipulated time frame prior to departure. .

2.4.6.4 Ground Services:

Vistara offers lounge services to its "business class" travellers and "club platinum" and "gold card members" at Terminal 3 at IGI Airport Delhi, this facility has been discontinued from April – 2020. Vistara currently provides lounge access to Plaza premium lounge at T3 terminal.

2.4.6.5 Service schemes and offers:

Vistara uses the club Vistara a value based programme to award points on the basis of money spent instead of miles travelled. Its agreement with Singapore Airline allows passengers to redeem points with Kris flyer programme of Singapore Airlines and Silk Air flights.

2.5 IATA (International Air Transport Association):

The International Air Transportation Association (IATA) is a non-governmental organisation and its membership consists of almost all air carriers. It aims at encouraging the development and provision of dependable, regular and economic air transport for the benefit of travellers. It also fosters air commerce and researches the problems and issues

related to air industry. It highlights the critical need of improving service quality and gives empirical suggestions to improve customer satisfaction.

2.5.1 Significance of "service quality", "customer satisfaction" and "customer loyalty" in aviation:

IATA gave high priority to "customer service quality", "customer satisfaction" and "customer loyalty" issues, and started pioneering packages to the benefit of the aeronautics industry. IATA's innovative products and services epitomize unique viable alternatives and have generated value in the aviation industry for over 70 years. Revenues generated by these products and services are ploughed in to support industrial programs in critical areas such as passenger safety and experience.

Direct Data Solutions (DDS) facilitates airlines to make commercial decisions based on all-inclusive passenger traffic data derived from passenger information with a ticket. DDS is the world's largest air ticket data depository, with over 5.1 billion transactions accessible to users since 2010. In mid-2016, DDS had already covered about 92% of agency sales worldwide. It is also the most complete data set in the world, as it includes ticket details such as fares and fees.

By offering this service IATA intends to:

- Understand the passengers
- The aspects of flights requiring improvement

Table 2.8 gives details of the relevant passenger issues for the improvement of services, thereby improving satisfaction and building loyalty.

Table 2.8: Passenger issues (IATA)

S.no	Passenger Issues	Business Class (Percentage)	Economy Class (Percentage)
1	Others	40	26
2	Seat Comfort	8	16
3	Sleeping Comfort	10	14
4	Legroom	-	8
5	Cabin Temperature	7	8
6	Punctuality Of Departure	8	8
7	Cleanliness Of Toilets		6
8	Spaciousness of cabins	-	5
9	Efficient Boarding	6	5
10	Helpful Staff	5	4
11	Selection of movies	6	-

(Adapted from Airs@t)

The importance attached by D.G.C.A as shown in table 2.3 to the reasons for passenger complaints further increases the purpose of this study to eliminate and reduce the number of complaints.

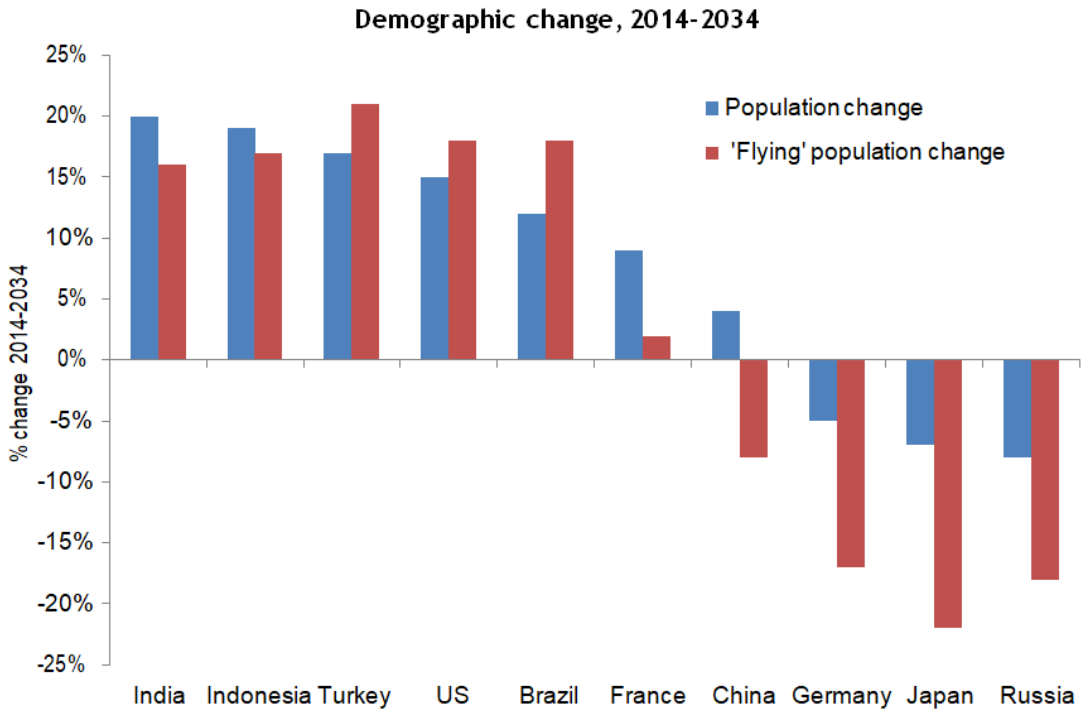
Table 2.9: Reasons of passenger complaints (DGCA)

S.no	Passenger complaints	Percentage
1	customer service	24.4
2	Baggage	24.2
3	flight problem	27.5
4	Refund	7.3
5	Fare	3.6
6	Catering	0.1
7	staff behavior	5.8
8	Disability	0.3
9	Others	6.8

Source http://www.dgca.nic.in/reports/rep-ind.htm

According to IATA the shape of airline travelling passengers will undergo a change in the next twenty years:

Figure: 2.1 Demographic Change of airline passengers



Source IATA / Tourism economics air passengers' forecasts

2.6 Summary:

Aviation in India is in an embryonic stage, it is evolving constantly and massive growth is anticipated by economists and industry. This being a competitive phase for the industry a few airlines have closed down, the most recent being the closure of Jet Airways the oldest private airline operating since the open skies policy of the government. However new airlines have emerged on the scene and have shown enormous potential for growth like TATA SIA (Vistara) and Indigo airlines. As per the latest reports of DGCA the domestic air passenger traffic in January – 2020 increased by 2.2 per cent compared to January - 2019. Recent statistics published by "Department of promotion of industry and

internal trade" (DPIIT) Foreign Direct Investments (FDI) inflows in India's aviation industry has touched 1904.13 million US $ in 2019.The government has announced 100% FDI in the areas of scheduled services, regional aviation services and the domestic scheduled passenger airline services with a clause that above 49% FDI would require an approval.

As per the International Air Transport Association (IATA), the fluctuating fuel prices and price wars between airlines have been the reason for the failure of leading airlines such as King Fisher and Jet Airways. According to the "Center for Asia Pacific Aviation (CAPA), aviation services models in India are not planned to cope with frequent shocks such as high fuel prices, fiscal recessions such as the current Corona pandemic assault.

Chapter 3: Literature Review:

This section gives a comprehensive analysis of present academic writing relating to service quality of aircraft, satisfaction level of travellers and their loyalty i.e. reusing the services again. It is critical to set up the origin, progress and the basics of knowledge (Moller and Halinen, 2000) so as to support 21st century thoughts of service quality that builds up a strong system for evaluating consumer loyalty in airline business. Present writing analysis evaluates conventional academic sentiment and discussions encompassing knowledge of service quality and measurements through which it is presently evaluated. This section will subsequently assess correlations among AIRQUAL, consumer loyalty and customer satisfaction to highlight suggestions dependent on existing writing. On the basis of this evaluation, for business of airline a model for consumer loyalty is projected dependent on theoretical establishments that have risen up out of existing literature.

3.1 Service Quality:

It is significant sign of satisfaction of the customers as well as indispensable for an organizations survival along with growth (Parasuraman, Zeithaml and Berry, 1988). Because of particular attributes of services, service quality is a summary and vague concept, varying from the idea of good quality that can be estimated independently by pointers, for example, quantity of imperfections or durability (ibid.). According to Liou et al. (2011) the issue of service quality, may convey different meaning in different industries so it lacks a universal definition. According to (Sukati et al., 2015).To group service quality means the “comparison of service expectation with actual performance perceptions.” According to Ban, J.; Ramsaran, R.R. (2017). The quality of the service is a major influence in improving the performance of a business, remembering the supportive emotional responses of customers, creating rewarding, lasting valued relationships between the company and its customers. Service quality is an assessment based on the perceptions of the consumer and the actual service provided.

3.1.2 Concept and Definition:

Four traits inseparability, perishability, heterogeneity and intangibility distinguish services from goods signify that it is complicated job to guarantee service quality in comparison to quality of product. Service quality could be characterized as "the distribution of superior or better service relative than client desires" (Zeithaml and Bitner, 1996).this comes from result of an assessment procedure where clients look at their desires and view of service (ibid.). Service quality is created in a communication procedure among service organization and client. Further it can be categorized as physical, corporate as well as 'interactive quality' (Parasuraman, Zeithaml and Berry, 1985). Physical quality includes physical component of services (ibid.). Because the whole service is not fully intangible, while all goods are not entirely substantial, both are constantly a mixture. (Zeithaml and Bitner, 1996). Corporate quality incorporates image otherwise report which an organization has, whereas interactive quality develops as an interaction procedure among worker and customer while an interaction among various clients (Parasuraman, Zeithaml and Berry, 1985).

3.1.3 "Service Quality" in Business Context:

In competitive era, it is a crucial element for an organization's survival and growth (Suhartanto and Noor, 2012). Better quality of services enhances consumer loyalty that provokes customers to suggest the firm in addition to they are having repurchase aims (Leong et al., 2015). An enterprise which provides superior quality of services can energize to eight percent more for their contributions along with accordingly expands firm's benefits (Gilbert and Wong, 2003). These organizations can distinguish from its rivals and through this acquire an exceptional place in marketplace (Bawa, 2011). Through acquiring a favorable position in market condition, superior organizations of service quality might enhance their market share more effectively along with also arrive at greater profitability (Gilbert and Wong, 2003).

In 1978 post deregulation, airline business has turned into an exceptionally competitive condition (Tiernan, Rhoades and Waguespack, 2008).In airline business, firms competing up against one another can just distinguish on the basis of cost or quality of services (Kim and Lee, 2011). Cost competition, although prompts a no-win scenario over long period (Chou et al., 2011). Moreover aircraft travellers frequently utilize their viewpoint of service quality as reason for general quality assessment of organization (Babbar and Koufteros, 2008).

3.1.4 "Service Quality": Gap Model

Parasuraman, Zeithaml & Berry (1985) proposed a gap model for "service quality" assessment and comprises of five gaps. It acts as a structural model to enhance the service quality of service firms. Figure 3.2 (Section: 3) represents its concept.

Gap first is created among expectations of customer and management perceptions. (Parasuraman, Zeithaml & Berry, 1985). Contributors of services sometimes fail to understand which aspects assess service quality to customer. Management along with customers is having diverse view point on requirements of customers and its fulfillment with superior quality services (ibid.).

Second Gap is relating to management perceptions and particulars of "service quality". (Parasuraman, Zeithaml & Berry, 1985). Firms may have issues in attaining, increasing expectations of customer because these are not completely dedicated towards service quality and also have to confront resource and market restrictions (ibid.).

Third gap exists among particulars among quality of service and delivery of service (Parasuraman, Zeithaml & Berry, 1985). On behalf of firm, employees provide services so it causes variations in performance. It's not possible for management to maintain service quality standard every time even if directions are there for better service performance (ibid.).

Fourth gap represents inconsistency among delivery of service with external communications (Parasuraman, Zeithaml & Berry, 1985). Communicating customers

about the delivery of better services via advertising on media or through different channels, leads to increased customer expectations though it will lower perception quality unless these standards are met (ibid).

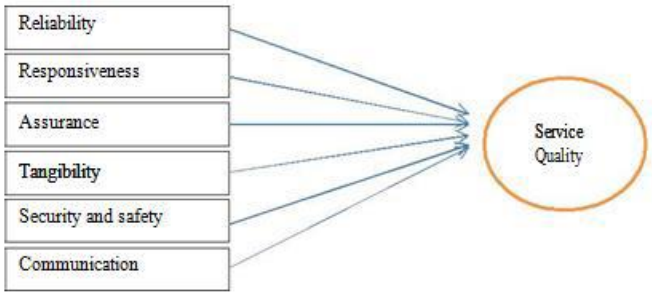
Fifth gap represents the gap among the experienced and anticipated service (Parasuraman, Zeithaml & Berry, 1985).A repeated quality check by the service provider may be taken as a negative indicator by the customer.

3.1.5 Conceptualization of Service Quality:

Service quality has two major approaches: Nordic methodology and American methodology. Nordic methodology states that, service quality comprises technical along with functional quality respectively. (Noor and Suhartanto, 2012). The former might be interpreted as a quality of methodological result of service transfer stratagem (Grönroos, 1984).therefore; it results out of a connection of the consumer with the service organization. This kind of value can be estimated in a generally independent way by customer (ibid). Whereas functional quality includes manner by which services is delivered (Parasuraman, Zeithaml and Berry, 1985). Procedure of service delivery consistently relies upon workers performance, impact of different clients and client participation (Grönroos, 1984). This sort of quality is seen rather emotionally, which makes difficult to estimate it (ibid.). According to American methodology, service quality comprises of five measurements, which are otherwise called SERVQUAL measurements (Suhartanto and Noor, 2012). These measurements are namely “Reliability, Responsiveness, Empathy, Assurance and Tangibles”.

Expectation-disconfirmation model is the reason behind this approach as it defines “service quality” as a difference between what a customer desires are and service perceptions (ibid). As far as service quality gap is concerned, SERVQUAL tests the fifth gap, which implies discrepancy between perceived and anticipated assistance. The following figure; Service quality model illustrated by a UAE based airlines “Quality of service and customer satisfaction”: Rahim Hussain et.al (2014) gives a fair idea of the subject.

Figure 3.1 Service Quality model



Source: "Service quality and customer satisfaction of a UAE-based airline proposed by Rahim Hussain et.al (2014)".

Table 3.1 Evolution of Service Quality

S.No	Researcher	Year	Findings
1	Zeithaml V.	1981	Customers of hospitality blame themselves when disappointed with their poor decision. Employees must concentrate on unhappy clients and can search for and address sources of frustration.
2	Greenrooms Christian	1982	Service quality is what separates hospitality establishments, but lacks a consistent description of the quality of service. A few suggestions for meanings of service quality were divided into image, functional and technical components.
3	Parasuraman, Berry, and Zeithaml	1985	Components of perceived service quality are Assurance, Efficiency, Tangibles, Empathy and Accountability. SERVQUAL dimensions were used to research the quality of service in the service sector, including finance, tourism and transport, as well as the hospitality sector. This was further divided into 22 components.

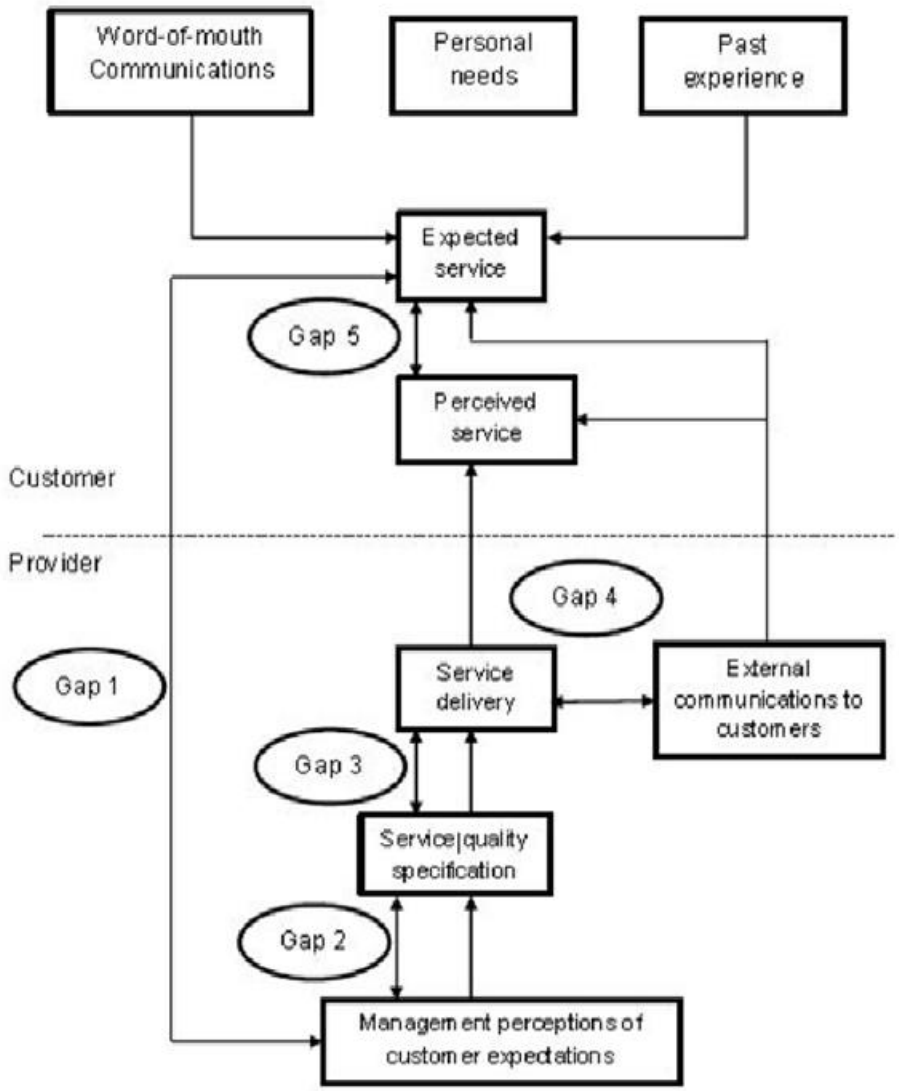
4	Galloway & H	1996	Identified a service quality model focused on operational problems that are directly related to the training and skills of staff. These are built on three essential dimensions of hard/soft, result/process and objective/subjective.
5	Chacko	1998	Discussed the shortcomings of the organizational structure and concentrated on the organization of the hotel. The formation of a service quality atmosphere is an organizational engine, making the improvement of service quality a real competitive advantage for hotels.
6	Parasuraman	2000	Broaden their productivity assessments from a company-oriented viewpoint to a newer customer-company perspective.
7	Davidson	2003	Direct connection between environment, culture, performance and quality of service
8	Narangajavana Yeamdao	2008	There is a direct connection between “quality of service” and “efficiency”.

3.2 Service Quality of Airline Industry:

In describing this concept, Parasuraman et al. (1985, 1988, 1990, and 1991) and Berry (1983) emphasized that actually quality should not be determined by researchers and business experts directly. Alotaibi (1992) expressed that they must disintegrate term quality into controllable factors or elements, which can be assessed as well as developed. Parasuraman et al. (1985) built up strategy in favors of measuring client’s opinion regarding quality of services. SERVQUAL reveals opinions of customers regarding quality which is impacted by sequence of 5 particular gaps that can hinder by distribution of top quality services. Every gap quantifies variation. First one evaluates variation among real desires of client and view of management on customer desire. Second Gap estimates variation between the management' view of client desires and service quality

desires. Third Gap deals with variation between service quality particulars and service really conveyed. Fourth Gap evaluates variation among service released and services conveyed to clients. Fifth Gap possibly is most significant which arises among client desires and opinions, that measures supposed "service quality" (Parasuraman et al., 1985). The gap model diagram 3.2 reveals the above mentions gaps.

Figure 3.2 the Gap Model



Source: Parasuraman, A., Zeithaml V., Berry, L.L. (1985).

Moreover, Parasuraman et al. (1990, 1991) developed a theoretical framework to process as well as assess gaps in earlier theoretical model of service quality. Analysts examined SERVQUAL scores with element of construct markers perceived service quality Gourdin (1988) performed one of the key studies that led to aircraft service. But Gourdin (1988) didn't use SERVQUAL. However in 1991 Gourdin and Kloppenborg used the Parasuraman et al. (1985) theoretical gap model to identify difference between the desires of the passengers as well as the perception of management about prevailing gaps that may use client disappointment in aviation industry. The SERVQUAL scale system discrepancies have also applied by several observers to study the alleged quality of services. (Fick and Ritchie, 1991).

Their approach was condemned by several researchers like Cunningham et al. (2004) and they further highlighted that, "they essentially revealed the mean scores of customer desire and perception of service performance measures and failed to evaluate the general effect of different SERVQUAL things on total service quality and fulfillment". Researchers also pointed out that SERVQUAL might reveal out good results of data analyses of particular items are quantified via statistical multivariate method.

While developing SERVQUAL it was noticed that focus group as well as in depth interviews both strategies were accepted foremost by senior administration of different service organizations like banks, media transmission, security, financiers, apparatus maintenance and repair, shops and credit card firms. Moreover, their observational research was accepted .(Parasuraman et al., 1985) it was demonstrated that standard utilized by clients for determining as well as evaluating service quality comprise ten dimensions which further changed to five primary measurements. Observations and desires are estimated on Likert 7-point scale at (perception - desire) scores of gap.

Advanced SERVQUAL edition, (Parasuraman et al., 1988) interchanged credibility, communication, competence, security, as well as courtesy in addition to one basic component, assurance. It comprises of different measurements like-

1. Clients should be able to trust organization workers.

2. Clients should have the option to have a sense of security in their transactions with these organizations' representatives.

3. An organization workers should be polite; their representatives should get sufficient help from these organizations to carry out their responsibilities well.

Moreover, accepting/knowing clients and access was interchanged by empathy. Things utilized by them for empathy (desire as well as perception) are:

1. It should not be accepted on the part of firm to give attention to individual customers.

2. It should not be expected from the workers to give personal consideration to clients.

3. It is unlikely to expect that workers should comprehend what requirements of their clients are.

4. It is not viable to expect that these organizations should have their clients' eventual benefits on fundamental level,

5. They should not be relied upon to provide working hours that are beneficial to each of their clients.

The outcome of this scale purification procedure came as a new advanced tool of SERVQUAL with 22 items as well as five measurements, specifically; “tangibles, dependability, responsiveness, assurance and empathy” (Parasuraman et al., 1988).

3.3 Measuring Service Quality:

The tangibles elements assess customer’s expectations as well as their views about physical facilities, personnel growth as well as equipment (ibid.). Reliability incorporates “ability to perform promised service dependably and accurately” (Parasuraman, .et.al,

1988), measurements termed responsiveness states willingness of service provider to provide services to customers speedily or on time (ibid.). Assurance termed as "knowledge and courtesy of employees and their ability to inspire trust and confidence" (Parasuraman, .et.al, 1988), along with empathy incorporates clients assessment of service company regarding caring and individualized attention provided by these firms. Every measurement comprises of 22 items in SERVQUAL scale. Further two statements are revised for each item. First statement assesses expectation and other one perception of customers (ibid.). Comparison among both above mentioned statements highlights variation among both statements which further signify service quality perceived by customers.

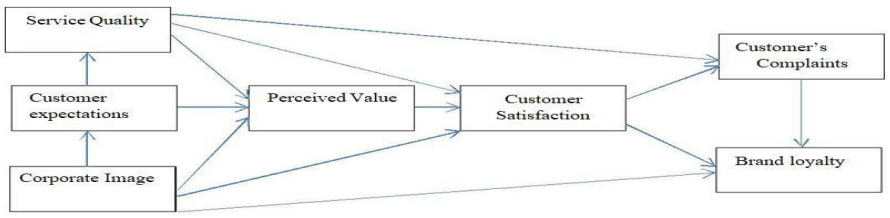
Expectations estimated via SERVQUAL model can be inferred in various ways (Gilbert and Wong, 2003). Clients may rank significance of service quality in their reaction instead of their actual desires for delivery of service. Other option is that client's react relating to projected performance, so performance they would hope to get in their mind that can occur. A diverse inference of expectations is warranted performance, which can be comprehended as expected performance that customers feel they deserve. Besides, clients can expect result they get to compare to costs that were made. One final conceivable inference of client's expectations is base performance that they endure (ibid.).

SERVQUAL model is regularly utilized although it obtains some critique. One significant issue that analysts critique is incorporation of the desires (Ekiz, Hussain and Bavik, 2006). As discussed earlier, client's desires can be interpreted in various manners and thus, it can't be ensured that consequences of service quality research are reliable. Moreover, few analysts contend that disconfirmation approach isn't verified, neither hypothetically nor observationally (Ekiz, Hussain and Bavik, 2006; Nadiri et al., 2008). (Ali, Dey and Filieri, 2015) hold the view that it's not possible to use SERVQUAL scale anywhere for any service facility enterprise. Various businesses need particular organization based measurements and in this way various altered variants of scale have

been created with passage of time (Alotaibi, 2015). Moreover, SERVQUAL model is seen as situation and culture oriented, thus for instance it is essential to take into account past experience that client encountered with service organization (Leong et al., 2015). Moreover, SERVQUAL model is seen as situation and culture oriented, thus for instance it is essential to take into account past experience that client has had with service organization (Ismail and jiang, 2019). So as to conquer critique w.r.t consideration of expectations in SERVQUAL scale, another scale has been created termed as SERVPERF (Nadiri et al., 2008) which quantifies just performance results of procedure of service delivery disregarding customer expectations which they has had before (ibid.). It includes similar five measurements from SERVQUAL scale, specifically physical assets, reliability responsiveness, assurance and empathy (Li and Liu., 2018) in addition it was found to investigate more discrepancy in the whole assessment of quality of service as in comparison to SERVQUAL scale (Ekiz, Hussain and Bavik, 2006). Due to its generality and its inability to take into account industry-specified components of service quality, the SERVPERF scale has been criticized (Ali, Dey and Filieri, 2015).

With expectation to overcome issue of generality for which both SERVQUAL and SERVPERF scale have been found to have fault., AIRQUAL was created, considering particular components of airline business (Alotaibi, 2015). Model comprises of five aviation industry-specific measurements: ‘aircraft tangibles’, ‘terminal tangibles’, ‘work force’, ‘empathy’ and ‘image’ (Ekiz, Hussain and Bavik, 2006). Alotaibi (2015) found that AIRQUAL scale integrated products are reliable and valid to assess quality of service in the aviation industry.

Figure 3.3 “Airline service quality model”



Source: “Service quality and customer satisfaction of a UAE-based airline: Rahim Hussain et.al (2014)

3.4 Customer Satisfaction

Consumer satisfaction is a crucial element in literature of marketing. Consequently many definitions of consumer satisfaction are described below, followed by introduction of expectancy- disconfirmation theory, various conceptualizations and consumer satisfaction segments and there function in business setting.

3.4.1 Defining Customer Satisfaction:

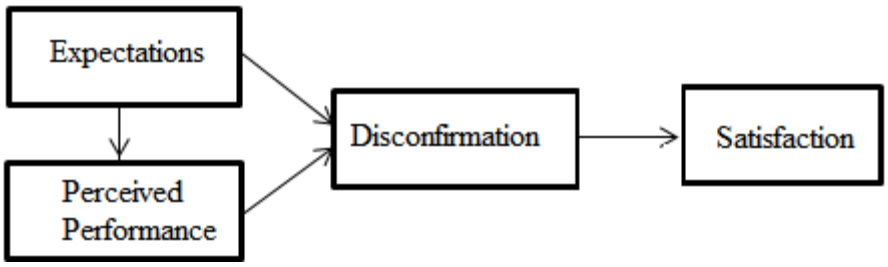
Satisfaction word came from two terms Latin language, satis and facere which implies enough and to do or make respectively. (Oliver, 2010). Right now, products or services that are fulfilling to the client can give what the client thinks to be (ibid.). Different analysts characterize consumer satisfaction as the total assessment dependent on overall buy and utilization involvement with good and service over time" (Han et al., 2019), as sentiment of joy or displeasure when a client contrasts an item's perceived performance and their earlier expectations" (Chow and Fung, 2018) or as customer's reaction to assessment of perceived difference among earlier expectations and authentic performance of item as professed after its utilization" (Suhartanto and Noor, 2012). Last two defines share in common the element that customers contrast anticipations and perceptions; this is additionally basic supposition of expectancy disconfirmation model.

3.4.2 Expectancy-Disconfirmation Theory:

Customer satisfaction is discussed by a wide range of theories, not only the expectation-disconfirmation theory, but also the ‘equity theory’ and the ‘comparison-level theory’. (Suhartanto and Noor, 2012). Maximum recognition has been granted to the expectancy disconfirmation theory. It represents the creation of consumer preferences, which can be defined as a perception of pre-use[s] related to products and services prior to the use of offerings (Suhartanto and Noor, 2012). Primary supposition of expectancy disconfirmation model is that expectations developed by clients are disconfirmed due to

performance comparison. Disconfirmation arises due to inconsistency among customer expectations and actual execution that client sees through utilization of goods as well as services (ibid.). When client's desires are not fulfilled, service quality is viewed as unsatisfactory along with client feels disappointed (Ringle, Sarstedt and Zimmermann, 2011). In any case, circumstances are there in which it is difficult for client to shape desires, assess performance or contrast those two components (Alotaibi, 2015).

Figure 3.4: Expectancy disconfirmation model



Source: Expectancy disconfirmation model by Bakri and Elkhani (2012)

3.4.3 Satisfaction Components:

Consumer satisfaction is highlighted by two elements: cognitive and affective components (Alotaibi, 2015). The cognitive part incorporates contrast among customer expectations before and perceived performance of goods as well as services (Loureiro and Fialho, 2017). Therefore, it envelops expectancy disconfirmation theory as discussed earlier. Whereas affection component, include feelings for instance reason for assessment (Loureiro and Fialho, 2017). Satisfaction relies upon whether client has a supportive otherwise unfavorable attitude towards utilization results (Alotaibi, 2015). Affective satisfaction in comparison to cognitive is more abstract.

3.4.4 Customer Satisfaction in Business Context:

It refers to one of fundamental view of marketing (Bawa, 2011). It refers to consequence of marketing processes in context to marketing oriented firms (Sandada & Matibiri,

2016). The primary task of utmost importance for these firms, particularly in case of service operators (Bawa, 2011). Satisfying clients is more complicated than making them happy for buying goods due to complicated and multilayered nature of services (Farooq et al., 2018). Furthermore, it is essential to retain customers by satisfying them in context of service industries. (Kim & Lee, 2011). It was observed that for acquiring new clients expenditure incurred is five times higher than amount spend on satisfying as well as retaining them. (Sandada & Matibiri, 2016).

Several elements affects satisfaction level of customer and it is affected by perceived service quality (Zeithaml and Bitner, 1996). Better level of quality of services, more satisfied will be customers. Moreover perceived worth as well as price along with personal and situational aspects also influence satisfaction level of customers. It incorporates' client relationship', 'reliability', 'empathy', 'technology', dedication or 'maintaining privacy' (Moslehpour et al., 2017).

Firm's performance along with behavior of consumers has significant impact on customer satisfaction. Numerous analysts favoured that it positively affects profitability, share of market in addition to firm return on investment (Ekiz, Hussain and Bavik, 2006; Oliver, 2010). Satisfied clients reduce selling expenditure of firms since it is more prudent to satisfy clients as in comparison to attract fresh clients. (Anderson, Fornell and Lehmann, 1994). Also, having foundation of satisfied clients is mark for common strength of an organization (Alotaibi, 2015). It increases goodwill of firm as satisfied customers regularly take part in positive idle talk and prescribe firm to other people (Nadiri et al., 2008, Anderson, Fornell and Lehmann, 1994). All things considered, these clients repurchase an item or service of an organization which can in long run lead to client loyalty (Anderson, Fornell and Lehmann, 1994). Also, change in price is easily borne by the customers due to the fact that they give importance to advantages they get through from purchasing or utilization of goods or services. Furthermore, satisfied clients are not having issues to complain thus firm needs to contribute fewer assets for maintaining return, improve on faulty items as well as maintaining complaints (ibid.). In

a business of airlines, there is high level of rivalry in entry as well as exit restrictions are controlled (Sandada and Matibiri, 2016). Therefore, consumer loyalty might assist with protecting clients from cut-throat competition as well as hold them (Anderson, Fornell and Lehmann, 1994).

3.5 Relationship between Service Quality and Customer Satisfaction:

Service quality and consumer loyalty concept are firmly associated; anyway terms are not similar (Ismail and Jiang, 2019). Both two include expectations difference and real performance of service delivery (ibid.). This possibly directs uncertainty about partition of these concepts (Parasuraman, Zeithaml and Berry, 1994). Though, a few contrasts among conception of service quality and consumer loyalty are there. Firstly, perceiving quality doesn't really require experience of utilization (Oliver, 2010). To develop a view on nature of an item or service, it is sufficient to relate with other clients' experience or their views on item or service. For the development of a condition of satisfaction, then again, it is essential to have experienced an item or service. Secondly service quality along with consumer loyalty is measurements or traits that are basis for assessment. Whereas quality is after effect of assessment of rather particular measurements, ‘satisfaction’ can be decided with any measurement.

In addition “service quality” and “consumer loyalty” contrast that whether they are measured by cognition or influence. Performance, from one viewpoint, is principally characteristic based and therefore rather cognitive while; happiness comprises both cognitive and affective components (ibid.). Another major point that differentiates the two principles is that global assessment in service efficiency, while ‘satisfaction’ is a specific exchange evaluation (Parasuraman, Zeithaml and Berry, 1988). Service quality associated with common prevalence of service that is made on decision about previous experiences in type of summarised judgment (Oliver, 2010). Conversely, consumer satisfaction is assessed throughout and also following a specific process for delivery of services and is just founded on that experience (ibid.). Informal association of service quality and consumer loyalty is a topic explored in order to differentiate between two

definitions. (Parasuraman. et.al., 1994). Better quality of service, higher consumer satisfaction (Raja guru, 2016). None the less, many scholars analyse that consumer satisfaction directs service quality or these two ideas are independent from one another. The first form of relationship will be evaluated in the current research and therefore if service quality, estimated by AIRQUAL scale, will impact degree of consumer satisfaction.

3.6 Emergence of AIRQUAL:

Specified broad critique of SERVQUAL is a procedural evaluation of the quality of service; Bari et al. (2001) developed another assessment i.e.: AIRQUAL. It was utilized to quantify service quality of aircraft in The Turkish Republic of Northern Cyprus (TRNC). The major purpose behind its formation was that the prevailing scales which were formed and assessed in various nations to measure service quality were not psychometrically qualified in TRNC. This proceeds to our knowledge of culture and perspective as being basic to way toward evaluating customer thoughts of 'service quality'.

AIRQUAL was significant because several specialists contended that \measurements and nature of SERVQUAL build might be for particular industry. Moreover, numerous investigations have attempted to imitate five-measurements of SERVQUAL, yet have brought about principal component analysis (PCA) in which just one measurement was seen as important. Occasionally it was outcome of exploratory factor investigation with Eigen values more than 1 rose with even ten measurements, thus in 1990 Carman, depicted SERVQUAL measurements as not being absolutely conventional. Nadiri, et.al, 2005, created a similar two-dimensional scale. Likewise, analysts discovered performance just (SERVPERF) to be an improved of investigating change in a general measure of service quality contrasted with SERVQUAL model. These contentions in this model caused analysts to create scales which are more industry centric.

3.7 Customer loyalty:

Client satisfaction idea has been built slowly with passage of time by an extensive group of researchers and scholars. In previous years, emphasize of loyalty was on brand loyalty w.r.t physical items (Tucker, 1964; Day, 1969). Cunningham (1956) characterized it as extent of acquisition of family unit committed to brand they buys regularly. Additionally, Oliver (1999) characterized client satisfaction as, "an extremely held devotion to re-purchase or re-support a favoured item/service regularly later on, thus causing repetitive same-brand or same brand-set buying, in spite of situational impacts and marketing efforts having capacity to change behavior". Thus, previous assumptions centered on loyalty as a firm idea on which item/service might depend. It is additionally contended by Oliver (1999) that no loyalty define incorporated every one of three segments of cognizance, influence, and social behaviour. For instance, a few researchers (Cronin and Taylor, 1992) concentrated exclusively on rebuy expectations, although another (Boulding et al., 1993) estimated this utilizing rebuy goals as well as readiness to prescribe. Therefore, Zeithaml et al. (1996) contended that price consciousness as well as price increase resistance was likewise frequently prohibited in past study.

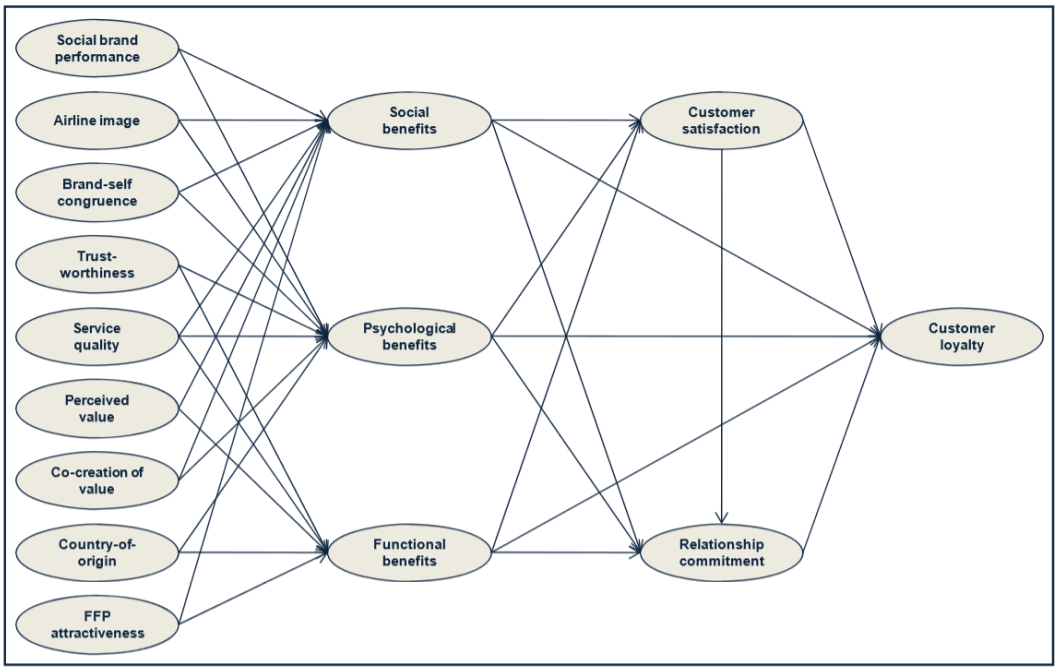
Though present literature review, came up with two major components of client satisfaction, termed behavioural measurement and attitudinal measurement (Kandampully and Suhartanto, 2000; Julander et al., 1997). Behavioural measurement signifies client's behaviour towards repeat buy, highlighting brand preference for service with period of time (Kucukaltan and Topcu, 2019), whereas attitudinal measurement signifies customers aim to rebuy along with suggest, which is judged a better sign of client loyalty by analysts. Oliver (1993) referred behavioural aim as after purchase action taken by clients after service experience. Zeithaml et al. (1996) project a framework to quantify outcomes of communication aims, where it is viewed as multi-facet perception, comprising informal correspondence, repurchase aims, price sensitivity as well as complaining conduct. Zeithaml (2000) clarified clients' rebuy goals as an action that happens after procurement of goods and services from an enterprise. It presented that a client has been retained by enterprises which is verified experimentally by numerous researchers to

strongly affect benefits (Reichheld, 1996). Moreover, rebuy aims positively affect an organisation development via expanded buys, eagerness for giving greater expenses, decrease expenditure on marketing along with minimum exposure to competitive offerings (Anderson et al., 1994). Other significant dimension of behavioural intentions is clients' ability to suggest.

As per Zeithaml et al. (1996), positive verbal exchange represents a clients' readiness to suggest. Firm benefit from this conduct since clients evoke their good impression of service quality among companions, family members, and peers along with reference gatherings, positively affecting different clients to direct business with firm. Verbal correspondences with each it can be positive or negative demonstrating to impact others' conduct (Susskind, 2002). Regarding expectations of the behavior, Alexandris et al. (2002) pointed out that it is a precise indicator of really behaviour and might be encouraging or troublesome relying upon satisfaction with service quality. Ideal behavioural expectations incorporate ability to prescribe, Intentions to pay an exceptional cost, and aim to keep on buying from the organisation later on considered ideal communicative intents an activity of loyalty. Clients who express ideal behavioural goals represent that they have framed a connection with an enterprise. In comparison, unfavourable behavioural goals, in view of impression of the quality of unsatisfactory service may incorporate intent to defect, plan to incur less transaction with the association, resolve to complain, and even plan to take measures to move out. The degree to which this bond impacts upon goodwill of the company again reveals subjective characteristics of intention to defect is when clients look for options and maintain a strategic distance from firm item or services. Kucukaltan and Topcu (2004) clarified that the probable cause for clients to decide to abandon as opposed to complaining is to ignore the chance of an upsetting arguments. Another critical behavioural expectation may be when clients resolve to complain. It might take a few structures, incorporating negative informal exchange to firm, different clients along with outsiders. Lastly, in addition, customers may engage through activities other than protesting or complaining. For instance, actions of opposition, picketing, looking for lawful activity, making displeased websites, and a bunch of other obstruction practices.

Jacoby (1971) reviewed wide literature of concept under study. Furthermore affirm that past investigations have emphasized mostly on behavioural results then overlooked consideration of what went on in clients' mind. In 1978 Chesnut and Jacoby additionally presumed that loyalty was basically estimated as its result qualities, for instance, deciding to group of purchase, level of a given brand purchase, and the possibility of purchase. Though, recent specialists (Alexandris et al., 2002) have exhibited empirical proof of usefulness of foreseeing client dedication for organisational growth.

Figure 3.5 Airline customer loyalty model by Judith (2018)



Source: The Airline customer loyalty model by Judith (2018)

Chapter 4:
Conceptualization of Model & Hypothesis Development

4.1 AIRQUAL model

Assessing service quality in airlines, analysts have been careful in creating quality measurements. Research associated with exploring the elements of service quality of airline stays broad as well as continuous (Ejem et. al 2019). Considering accessible data on air passengers inclinations, inquire about instrumentation on service quality estimates particularly to airline business were regarded vital. Due to this reason, Bari et al. (2001) developed “AIRQUAL” an instrument to estimate “service quality” in aviation business. It has particular five measurements, to be specific, airline physical assets, terminal effects, work force, empathy, and image. They conducted research in North Cyprus and researched whether AIRQUAL could effectively quantify aircraft client’s perception towards service quality. These five measurements of AIRQUAL instrument ask different parts of airline item. For instance, airline physical assets contain questions associated with internal structure of airplane utilized via aircrafts, nature of providing food in plane, neatness of plane's toilets as well as plane seats, there comfort along with nature of cooling in aeroplanes (Nadiri et al., 2008).

Terminal physical assets, other significant element of AIRQUAL, consists questions progressively associated with air terminals. As per this element, responses were taken regarding availability of basic necessities at airport like neatness of air terminal toilets, accessibility of shop in air terminal, parking spot accessibility, air terminal size , air terminal conditioning , committed zones for smokers, viability of sign age, accessibility of trolleys, productivity of security control framework, workforce uniforms and waiting hall comfort of air terminal. Third element of AIRQUAL includes questions which were intended to assess working of employees in airlines. For instance questions incorporated for this measurement were about attitude of employees, experience, knowledge as well as qualification, individual consideration of workers to everybody, obedience of workers, and airlines without mistake reservations along with ticket transactions. Fourth

component is "empathy", which suggests queries such as; punctuality of take offs as well as arrivals, transportation among city along with air terminal, remuneration plans if there should be an occurrence of misfortune or risk, attention towards traveller's luggage, medical staff accessibility throughout flights, airline organization workplaces areas along with total flights to fulfil travellers' requirements.

Image is final element of Airqual service quality (Bari et al., 2001, 2008). It includes queries such as contribution of accessibility of tickets on minimum price, reliability of ticket costs with provided services along with aircraft organization image. They utilized AIRQUAL to evaluate whether it could catch consumer loyalty alongside some different constructs. Both these researches revealed that service quality was estimated in a better manner via AIRQUAL, has statistically a major effect on consumer satisfaction. It was likewise revealed a major strong effect of service quality as estimated via "AIRQUAL" scale on client loyalty, behavioural viewpoints; rebuy aims as well as correspondence through word-of-mouth.

4.2 Model Development (Conceptual):

Researchers and specialists both have given a lot of consideration regarding understanding service quality comparable to consumer satisfaction and loyalty. Though, studies regarding functions of different service quality measurements as sign of consumer loyalty carriers provide conflicting outcomes and their relative significance stays uncertain (Rajaguru, 2016). For instance, a few analysts locate no major directing function of airline type, while others give empirical proof of such communications. In addition, some investigations provide thorough statistical systems to analyse potential contrasts in travellers' recognitions with respect to minimal cost and full-service carriers. A review of current literature on consumer loyalty in airline and different businesses reveals that consumer loyalty is firmly associated with service quality. Service quality termed as clients' general perception of relative inadequacy or pre-eminence of an organisation and the services provided by it (Bitner, Booms, and Mohr, 1994).Those Airline companies whose quality of services is better and have progressively satiated

clients, will have more travellers, in comparison to airlines with disappointed clients. As per SERVQUAL model, Han et.al (2019) recognized a few components of service quality that affect client's satisfaction:

- Physical assets,
- Reliability,
- Responsiveness,
- Affirmation and
- Empathy.

Also, an elective service quality dimension measuring tool, termed as "AIRQUAL" (Bari, et.al. 2001), has been projected. From the view point of SERVQUAL model, this instrument is modified according to airlines particulars and assesses service quality with these five measurements:

- Airplane effects,
- Terminal physical assets,
- Workforce,
- Empathy, and
- Image.

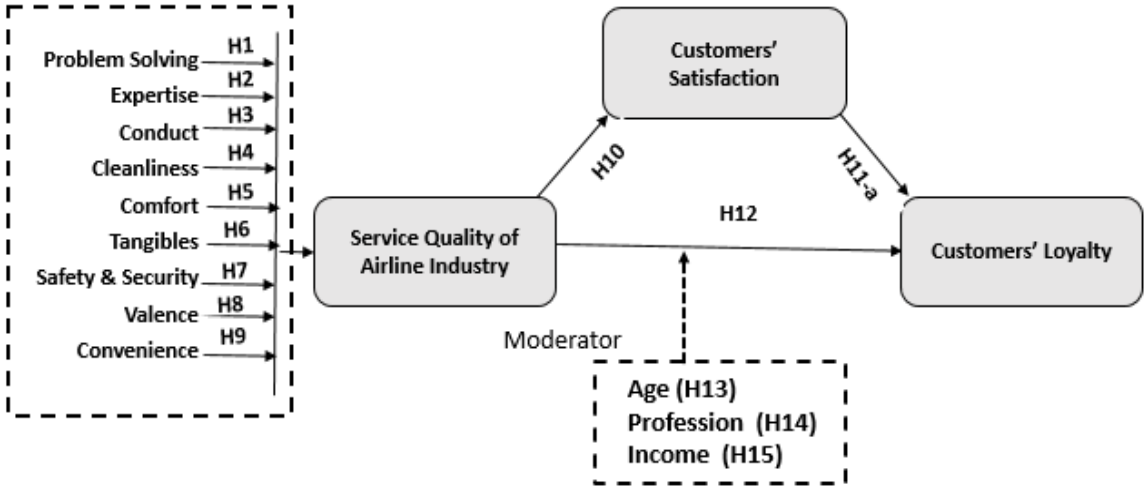
Consumer loyalty is a sign of repeated buys along with proposals through informal correspondence. Numerous researches affirm that progressively fulfilled clients add to higher organization benefits (e.g., Bernhardt, et. al., 2000). Moreover, consumer satisfaction is an antecedent of expanded share of market, productivity, positive publicizing via word-of-mouth as well as client loyalty (Anderson et al., 1994). Whereas a few researches believes behavioural aims as a versatile construct leads through consumer satisfaction, whereas others divide this into independent constructs to more specifically catch different organization related results, for example, word-of mouth conduct along with loyalty or rebuy goals.

Current review gives blended proof of connections among service quality, consumer satisfaction as well as behavioural aims over minimum cost along with full-service carrier settings. For instance, Ejem et.al (2019) revealed that service of airlines is perceived likewise by travellers and can't reveal major contrasts in association among satisfaction and its precursors in addition to between behavioural aims and their factors across different airlines categories. Researchers contend that price rivalry has compelled full-service carriers to bring down their costs and offer service comparable fundamental as minimal effort aircrafts. Also, Han et al. (2019) are unable to recognize any distinctions in causal connections between ease and full-service carrier settings.

Client loyalty has been defined in different manners. Jacoby and Chestnut (1978) recognized about 533 distinct defines as well as dimensions pertaining to loyalty by customers in the literature which was reviewed till 1970s. A host of definitions elucidating loyalty continue till today. These definitions explaining loyalty can be ordered as behavioural methodology, attitudinal methodology, and composite methodology for both attitude as well as behaviour, with understood temporary measurement. Behavioural methodology centres on repeat buy (Han et.al, 2019). Air transport studies incorporate behavioural approach of loyalty. As per this, proportion of loyalty is regularly founded on 'portion of classification prerequisites' or 'portion of wallet' (Neal, 1999). Surviving experimental proof from different enterprises and nation settings regularly observes that most clients are "polygamous", or faithful to an arrangement of varieties in product class, and couple of clients are "monogamous" (loyal level of 100%) or "promiscuous" (without faithfulness to a particular brand) (Uncles et al., 2003). As investigated by (Uncles et al. 2003), behavioural methodology over looked individual as well as factors that impact on brand decision as per the situational demands. For instance, Harris and Uncles (2007) observed that for any airline business passengers; however performance perceptions and punctuality of airlines does have a task to carry out, previous buy behaviour is important driver of repeating an airline support. This suggests that re - buying may be caused by propensity or an absence of decisions (Dick and Basu, 1994), for example travellers have become "secured" to specific carriers.

Consequently, repeated transactions can't be seen as a percentage of genuine loyalty. Oliver (1999) characterizes genuine loyalty as intense commitment by a client to a particular service organization, regardless of components that may encourage changing to different suppliers. This loyalty concept approach analyses aspects concerned with the psychological client behaviour expressed as a preference or attitude, i.e. 'attitudinal loyalty'. Oliver (1997) recommended his view that clients can be loyal at each attitudinal stage from 'cognitive', 'affective', 'conative', to behavioural ones. Given that general satisfaction is characterized as a pleasurable satisfaction (Oliver, 1997), it tends to be viewed as a type of affective loyalty. Conative loyalty is comparable to motivational inspiration that indicate a product-explicit pledge to repurchasing (Oliver, 1999). Thus, conative loyalty thus has a meaning that is the closest to genuine loyalty.

Figure 4.1: Developed conceptual Model



4.3 Hypotheses Development:

To determine whether service quality is a precursor of consumer satisfaction in aviation business, Alotaibi (2015) prescribes to disintegrate quality into quantifiable measurements. Thus, present research effect of single AIRQUAL measurements on consumer satisfaction will be tested.

Last essential measurement, access quality, signifies to comfort and speed with which individuals arrive at their destinations. Parasuraman et al. (1985) refers that "access quality" is significant trait of service quality. It depends on two explicit traits or sub-measurements:

1) "Information" (Wu et al., 2011)

2) "Convenience" (Han et al., 2019)

The first sub-measurement, data, is an aspect that adds to the public vehicle quality and has been recognized as a sub-measurement of the quality of service. In like manner, Howat et.al, (1996) allude to data as plausibility of acquiring updated data about service assortment.

In service transportation, clients rarely visit physical foundations. Thus, main method for effectively and comfortably thinking about variety of item or service of an association is applied utilizing telephone or web. Subsequent sub-measurement, convenience, depends on something that is proposed to save assets (i.e., time, vitality) or disappointment. Clemes, et al. (2011) stressed that comfort in airline industry is one critical segment of service quality. Li and Liu 2018 however observe that convenience related research remains insufficient.

Service quality is general measurement comprising of four essential measurements: interaction quality, physical condition quality, result quality as well as access quality. Four essential measurements are steady with past study. The essential measurements are further divided into sub-measurements. They are a direct, mastery and critical thinking for association quality; tidiness, comfort, effects, and wellbeing and security for physical condition quality; valence and sitting time for result quality, data and convenience for access quality, Brady and Cronin (2001),. The vital sub measurements are explained.

The first measurement, interaction quality includes meaning of attitude along with behaviour. Attitude referred as an individual's feeling towards his like and dislikes due to

their behavioural performance. Role of this measurement is very crucial for customer satisfaction due to close interaction among customers as well as employees in service organisation. Second measurement recognised level of interaction influenced via worker's task-oriented skills (Solomon, Suprenant, & Czepiel, 1985). Expertise also influences evaluation of service quality by customers. Dabholkar et al. (1996) identified final Problem-solving, sub measurement. Although, this is considered to be as separate from personal interaction measurement since "service recovery has been identified as a critical part of good service"

Second essential service quality element: physical environment quality is particularly researched from start of 1970's for its ecological impacts on client conduct (Kotler, 1973). (Elliott, et.al.Stiles (1992) alludes to physical condition quality as the administration creation procedure of physical highlights. A few scientists have discovered that physical condition quality is most significant in client assessment of quality of service (McDougall and Levesque, 1994; Rust and Oliver, 1994). A physical condition excellence property has four explicit sub-measurements:

1) Neatness (Lockyer, 2002, 2003),

2) Comfort (Clemes, Gan, Kao, and Choong, 2008),

3) Effects (Ostrowski, O'Brien, and Gordon, 1994); and

4) Wellbeing and Security (Clemes et al., 2008, 2009, 2017).

- The first sub-measurement, "neatness", is distinguished as of the utmost significant aspects and highlights that aircrafts can offer to the travellers (Aksoy, Atilgan, and Akinci, 2003).

- The second sub-measurement, "comfort", which is the most important components of the physical, attributes o quality in aviation sector. (Chang and Yeh, 2002).

- The third sub-measurement, “physical assets”, is thing that clients use as a tangible proof of result of service as an intermediary for making a decision about performance. Parasuraman et al. (1985) demonstrate that this tangible proof is an element that service client ‘stakes into account while framing their perception about quality.

- The last sub-measurement, “safety and security”, has incited serious discussion over issues as essential as meaning of security and quality related to security as a multifaceted association among security and financial transaction related performance in aviation business recommends that a few travellers consider aircraft travel undermining and, to those travellers, loading up a plane is an actual existence and-demise issue. Accordingly, safety and security needs have been viewed as crucial.

H1: Problem solving quality leads Airline Industry to have better Service Quality.

H2: Expertise quality leads Airline Industry to have better Service Quality.

H3: Conduct quality leads Airline Industry to have better Service Quality.

H4: Cleanliness quality leads Airline Industry to have better Service Quality.

H5: Comfort quality leads Airline Industry to have better Service Quality.

H6: Tangibles quality leads Airline Industry to have better Service Quality.

H7: Safety & Security quality leads Airline Industry to have better Service Quality.

H8: Valence quality leads Airline Industry to have better Service Quality.

H9: Convenience quality leads Airline Industry to have better Service Quality.

4.3.1 Customer loyalty & Customer Satisfaction:

Organisation growth and enhanced profitability are results of loyalty (Hong and Goo, 2004). Loyal clients show positive behavioural expectations, for example, aims to return and rebuy along with to suggest (Tynan et al., 2009). Although, Gremler and Brown (1998), and again Cronin and Taylor (1992) contended that consumer loyalty as well as service quality are essentials for a client to be loyal,. Danaher and Mattsson (1998) additionally concurred to the need for a high consumer loyalty and service quality and ability to prescribe services to other people. Bitner (1990) affirmed that the informal exchange turns out to be increasingly positive as satisfaction enhances. Likewise, Barnes (1997) Verified that the stronger customer affiliation with service representative to be of prime importance to customer satisfaction and vital to improve profits, as the partnership that worker and customer share has a greater portion of company and a more influential portion of the wallet of the customer. Earlier researches on client loyalty have concentrated basically on loyalty that had an affiliation with the brand though the research on service organisation loyalty to the clients has remained restricted (Gremler and Brown, 1998). Numerous researchers presumed that finding in field of product devotion can't be summed up to service loyalty on account of numerous reasons. For instance, individual to individual communications is an inescapable component in service marketing; therefore service loyalty is increasingly reliant on advancement of interpersonal relationship rather than loyalty of tangible items (Berry, 1983). The impact of apparent risk is higher on account of services, as client loyalty may go about as a hindrance to the behaviour changes of the customers (Zeithaml, 1981; Klemperer, 1987). Furthermore, it is additionally obvious that in a service setting, elusive qualities, for example, reliability and certainty may assume a significant job in building or maintain loyalty.

Relationship between client satisfaction and client loyalty has been explored by numerous specialists. Cronin and Taylor (1992) revealed purchasing aims, as a significant element of the loyalty of a customer that influences the satisfaction of a

consumer. Getty and Thompson (1994) revealed that in housing experience, client's expectations to prescribe rely upon both their level of satisfaction and quality of services rendered. Kandampully and Suhartanto (2000) noted that there exists a positive correlation between both “satisfaction” of the “customers” and their “loyalty” to the product and service. Cronin and Taylor (1992) analysed the relationship connecting the three i.e. “service quality”, “consumer satisfaction”, and purchasing aim (an element of client loyalty). Every factor was determined by one time by them in their study. 660 usable surveys were gathered randomly from clients of four diverse types of organizations that included ‘banking’, ‘pest control’, ‘cleaning’, and ‘junk food’. Outcomes of correlation analysis recommended that:

- The standard of service was a front runner of consumer loyalty,
- Service quality had less effect than customer satisfaction on purchasing preferences.
- Client buy aims (client loyalty) was essentially influenced by consumer satisfaction. Comparable outcomes were established by Dabholkar et al. (2000) while consumer satisfaction positively intervened impact of service quality on behavioural aims as well as outcomes of regression examination in structural equations modelling (SEM) provided their suggestions that behavioural goals (client loyalty) positively influenced via consumer satisfaction contrasted with service quality.

Yu and Dean (2001) revealed positive result on use as progress, though negative impact on utilization was estimated as disappointment. These influences additionally incorporate emotional components, for example, joy, shock or disillusionment change this declaration one of the main issues in the ‘satisfaction study’ is that different experts focus on cognitive components & exclude the emotional element of satisfaction. Present marketing literature includes the importance of satisfaction in the association of nonstop buyers (Selnes, 1998). It was also noted that the satisfaction of the retailer with past performance

is basically identified with the long-term trajectory of the retailer. In retail sales environments, Swan and Trawick (1981) have revealed that satisfaction verifies the client's expectation of future actions in support of a retail location. Further Ping (1993) reviewed the fact that satisfaction is closely linked to the re-purchase goal in the service environment. Numerous studies have analysed the effects of “customer satisfaction” on “client loyalty” in a number of settings. For example, Han et al. (1997) found a positive relation between satisfaction and re-buy expectations in a consulting company, Cronin and Taylor (1992) have shown a clear correlation between “consumer loyalty” and “customer satisfaction” in four distinctive service projects, and Taylor and Baker (1994) have shown a positive relation between “consumer loyalty” and “satisfaction” in a long separation of correspondence settings.

After wide literature review, two principle ways of thinking can be confirmed with respect to causal connection among satisfaction and loyalty. Primary view thinks about satisfaction as principle driver of client loyalty. Researchers group assumes that satisfaction strongly influences loyalty, ability to prescribe, and word of mouth. (Kucukaltan and Topcu 2019) Satisfaction influences future client's decisions, which thus prompts improved client's retention and eventually these clients need to, proceed with their relationship and remain faithful to organization since they feel satisfied (Heitmann et al., 2007).

As indicated by these researchers satisfaction doesn't generally convert into loyalty and immediate impact of satisfaction on loyalty changes among enterprises. It is accounted by numerous scientists that a loyal satisfied client is as yet helpless against situational factors, for example, contenders' coupons or value cuts. Accordingly, satisfaction isn't probably going to be sole and solid indicator of loyalty.

Connection among “consumer satisfaction” and “client loyalty” is in no way, shape or form direct. It is positively impacted by attributes of client, for example, assortment chasing, age, and salary. Oliver (1999) has also agreed to the multifaceted nature of the

“satisfaction-loyalty” relationship and demonstrates that loyalty can completely combine satisfaction.

In view of above conversation on connection among consumer loyalty along with client satisfaction, below mentioned recommendations was proposed:

H10: Service quality of airline Industry has a significant effect on customer satisfaction.

H11-a: Customer satisfaction has a significant effect on customer loyalty in aviation industry.

H11-b: Customer satisfaction mediates the relationship between Service quality of airline Industry and customer loyalty.

H12: Service quality of airline industry has a significant indirect effect on customers’ loyalty in the presence of customer satisfaction.

4.3.2 Moderation of Customers' Demographic on conceptual model:

H13: Age of the customers’ moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H14: The Profession of customers’ moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H15: The income of customers’ moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

Chapter 5
Research Methodology

Analysis part of research methodology is discussed in this chapter. Data analysis of demographic profiling of respondents' such as age, education, gender is explored in details. Pattern and method used to frame the questionnaire, the content and instrument validity of the questionnaire, the pilot study prior to data collection, the validity and the related reliability are discussed here.

5.1 Research Methodology:

The current study is based on quantitative analysis, where the filtration of proposed conceptual model based hypothesis being done after collecting the responses of people who travelled either in any of the two airlines nationally or internationally. The quantitative analysis is useful in exploring facts, measures, numbers and percentages. Methods of quantitative analysis and research include:

- Using a closed - ended questionnaire and survey
- Large-scale sets of data
- Machines collected analytics
- Random sampling is carried out
- Structured data is used
- Software such as CRMs, marketing automation, advertising is used for monitoring.
- Data was collected with the help of Google survey form, with applying the snowball sampling techniques.

Data collection process and techniques are discussed in the research methodology section and also information regarding the design of research, population of research, the size of the sample, the techniques used for the collection of data is provided.

The techniques used to develop the questionnaire are clarified, the content of the questionnaire, the consistency of the instrument was tested. The pilot study was conducted to check the adequacy of the questionnaire and to check the validity and reliability of the scale used. The results for internal consistency and structural identification were also checked. Cronbach alpha was also applied to check to internal consistency and reliability of the scale following to the 'split half method" for exiting the questionnaire in its final form. Data collection offers a description of the statistical methods used to interpret the data in order to achieve the study objectives.

5.1.1 Research Strategy and Methodology:

The descriptive analytical method is applied for this study, as it is beneficial while conducting a research that aims to identify characteristics, frequencies, trends, correlations, and categories. A descriptive research aims to describe a phenomenon the ways it is, for example, describing social systems or relationships between events (Adams et al., 2007). According to Waliman, (2011) descriptive analysis attempts to examine the situations in order to describe the norm. The current study focuses to examine the impact of" Service Quality" of Airline Industry (SQAI) on "Customer Loyalty" (CUL). This research is characterised under applied researches which is dependent solely on from primary sources of data collection via a structured questionnaire for research purposes which is disbursed to a selected a specific targeted population identified for this study by the researcher; and analysed by (SPSS), AMOS-24.0 & Process (A. Hayes, 2013). The secondary sources of data collection includes aviation, travel and hospitality related books, scholarly articles accumulated from journals and periodicals, aviation related reports, and websites were referred to build literature review and conceptual background of the study.

5.2 Research Measures:

The type of measure suitable for any research depends on the type, cost, and time available for the study. A survey based method was the information from respondents in

this study. As a result, the survey questions were made by using Google survey form as short as possible without compromising its contents. Specifically, the use of self-reported perceptual measures to assess the estimates of the relationships that exists among the variables may be susceptible to same-source, same-method bias.

5.3 Measurement Scales:

5.3.1 Instrument Reliability and Validity

Although the instruments adapted for the present research had been pre tested and validated by their originators & other researchers, since the instruments were to be used in a new culture, it was deemed to be important to recheck their reliability, validity and unidimensionality based on the collected sample data. As a result, the reliability, validity and unidimensionality of the instruments developed for assessing quality of service provided by the airlines industry, the customer satisfaction, and loyalty of customers was re-examined prior to testing the measurement model and substantive structural relationships.

5.4 Research Procedures:

This research is carried out with the following steps:

1. At the very initial stage, research problems were identified which further helped to frame the questionnaire, related objectives and the proper planning for the research.
2. In the next step, a relevant literature review and a compilation of literature from academic journals, articles, reference books, textbooks, websites, internet-based knowledge and other source documents pertaining to: involvement in branded online communities through apps, brand attachment, self-disclosure, brand equity, trust, and attitude of users, satisfaction, and brand loyalty.
3. In the third step a “structured questionnaire” was developed and administered for data collection. Various steps followed involves:

- Formation of primary questionnaire through which research variables can be measured,
- Finalization of the questionnaire with the help and guidance of experts from Academia, industry of the domain in particular.

4. In the fourth step the questionnaire was distributed in collect the data. 750 questionnaires were distributed to the research population and 647 correctly filled responses were finally obtained.
5. The fifth step involves the data analysis collected with the help of administering questionnaires. SPSS, AMOS-24.0, and Adanco were used for the data analysis.
6. In the sixth and the final step the analysis of the data was done and the report writing was documented to reach to the conclusion thereby suggesting practical implications and future recommendations of the research.

5.5 Data for Analysis

5.5.1. Data Collection Sources

To complete the study and to achieve the Objectives of the present study the data was collected with the help of secondary and primary sources, thereby secondary and primary data was used in the study:

1. Secondary Data: Secondary information was used to frame the conceptual model, support the literature review. This is gathered from several aviation literatures, aviation linked reports, research journals, magazines, research papers, travel history books, travel related essays, aviation concerning researches, dissertations, websites, reports and documents related to the research topics.

2. Primary Data: The primary data was collected with the help of a pre structured questionnaire focused on service quality of airline industry, customer satisfaction

and customer loyalty towards the airline industries. The respondents are inquired regarding the research's variables.

Table; 5.1; Record of passengers travelled from Delhi on TATA SIA (Vistara) and Air India

S. No	Months	Vistara	Air India
1	Aug-18	299687	391878
2	Sep-18	293465	394959
3	Oct-18	263177	393899
4	Nov-18	265764	417049
5	Dec-18	303571	440533
6	Jan-19	298991	416400
7	Feb-19	297568	441240
8	Mar-19	319128	480019
Total		2341351	2984099
Average		292669	373012

Source: Articulated by the researcher own dataset

Table 5.1 gives detailed figures of the number of passengers travelled out of Delhi on TATA SIA Vistara and Air India in the months of Aug 2018 – March 2019. The data has also assisted in the determination of the sample size for the current investigation, which is further reflected in the methodology section. .

Table 5.2: Sample size for TATA SIA (Vistara) and Air India

Airlines	TATA SIA (Vistara)	Air India
Population size	292669	373012
Confidence level	95	95
Margin of error	5	5
Sample size	383	383

Source: Articulated by the researcher own dataset

5.5.2. The Research Population

Target population for the present research are the travellers from Delhi (India) using TATA - Vistara Airline & Air India; and from different education levels, majors, positions and genders.

The details are represented in Table (5.3 – a) & Table (5.3 – b).

Table (5.3 – a) Characteristics of the Research Population

Variables	Category	No.'s	%age
Gender	Male	415	64
	Female	232	36
Age	20 to 30 Years	13	2
	31 to 40 Years	322	50
	41 to 50 Years	56	9
	51 to 60 Years	229	35
	Above 60 Years	27	4
Qualification	Under Graduate or Lower	199	31
	Graduate	253	39
	Post Graduate	152	23
	Others	43	7
Occupation	Business Class	83	13
	Job Oriented	194	30
	Retired	24	4
	Students	209	32
	House Wifes	114	17
	Others	23	4

Source: Articulated by the researcher own dataset

Table:(5.3-b) Characteristics of the Research Population

Variables	Category	Number	Percentage
Nationality	Indian	458	75
	Non-Indian	162	25
Monthly Incocome	Rs. 30000 or less	67	10
	Rs. 30001 to Rs. 40000	102	16
	Rs. 40001 to Rs. 50000	66	10
	Rs. 50001 to Rs. 60000	205	32
	More than Rs. 60000	207	32

Source: Articulated by the researcher own dataset

5.5.3 The Research Sample:

A total of 647 respondents participetd in the study. Snowball smaplling method was adopted to collect the responses based on instrument design and conceptual model. In this type of technique i.e. snowball sampling which comes under non probability sampling where researcher start with a little sample particularly the known one and then accelerates towards the others thereby approaching them and placing a request for participation in the study. This sample group grows like a rolling snowball. As the sample builds up, enough data are gathered to be used for research purpose. The sample of participants must have experienced in at least three of the following social media platforms: Facebook, Twitter, LinkedIn or YouTube and admits connections to those viral contents for at one year through blogs, images or videos. Hence, the results will try to fit the predictability and generality in results (Gunawan and Huarng, 2015).

The study further explored diverse dimension of minimum sample size required with the help of G*power software, used for calculating minimum sample size on basis of statistical power as recommended by Foul, Erdfelder, Buchner, & Lang, (2009). In order to gain the statistical power in the software based upon twelve independent constructs, the value of f-square was generated with a value of 0.01. thereafter, on the basis of f-

square of 0.01 with 5 percent level of significance and 10 predictor variables in the study, G*Power software suggested a minimum sample size of 100 as suggested in Figure 5.1 mentioned below.

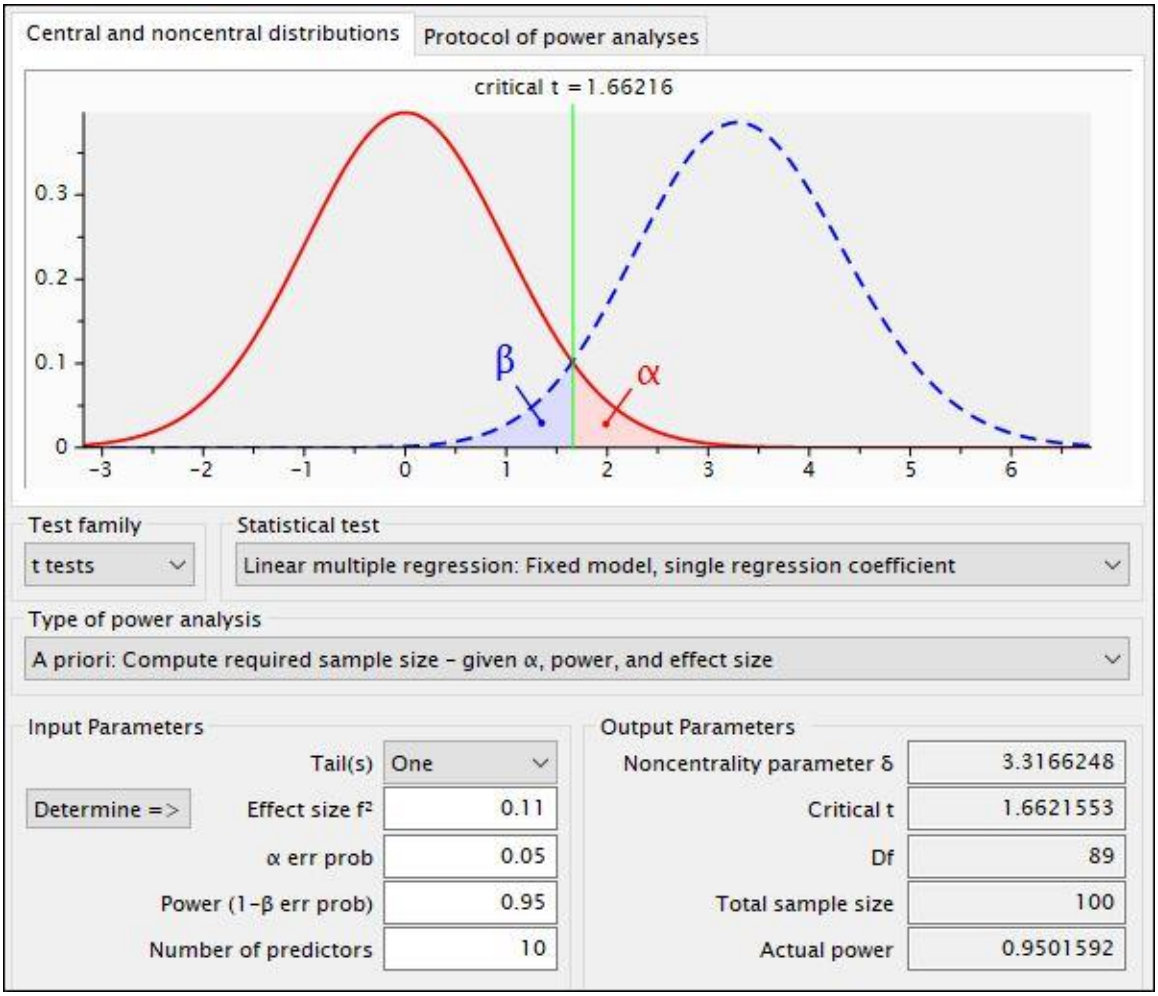


Figure 5.1: G*Power calculations for Minimum Sample Size

5.5.4. Data Collection Tools:

A pre structured questionnaire alongwith a covering letter elucidating about the motive and purpose of the current research was provided to participants, the manner to be used for answering, the aims of research and the security related information in order to encourage a high response was also explained. Structured questionnaires are researcher-

guided and in these the researcher asks the participant specific questions requiring a short response. The questionnaire is further sub divided into three parts/ sections: the first part of the questionnaire dealt with the personal information like name, gender, age , maritial ststus, educational level and occupation of the respondents. The questionnaire questions adopt 5 point Likert scale. Likert scale responses are easily quantifiable and subjective to computation and analysis. Scale for Service Quality of Airline Industry by Hung-Che Wu (2013), which is having 4 second order constructs followed by 11 first order constructs. The details are as given below:

- Interaction Quality comprising of ("Conduct", "Expertise", "Problem solving")
- Physical Environment Quality comprising ("Cleanliness", "Comfort", "Tangibles", "Safety & Security")
- Outcome Quality comprising ("Waiting Time", "Valence")
- Access Quality comprising ("Information", "Convenience")

5.6 Pilot Study:

A pilot study for the 'questionnaire' was conducted in the months of August and September – 2019. This pilot study helped to check the consistency of the questionniare, the lanuguae, the efectiveness of the items asked and sorting and omitting out of irrevelent quetions from it. Cronbach"s alpha (George & Mallery, 2006) is designed as a measure of internal consistency, that is, do all items within the instrument measure the same thing? The normal range of Cronbach"s coefficient alpha lies in between (0.0 and + 1.0), whereas the higher values reflects a higher degree of internal consistency of the items. And, after pilot testing of the statement, we concluded that all the questions are stated in perfact manner and understandable to all respondenets who participated in pilot study. Also, the cronbach alpha of all the constructs are significanlty reliable as it is more than .7 for all constructs, This range is considered to be the higand the results ensures the reliability of the items asked in the questionnaire, which helped us to stay with the framed items for respective constructs.

5.7 Validity and Reliability Concern:

5.7.1 Validity of questionnaire:

Validity of questionnaire is the extent to which what an instrument/ questionnaire measures what it is actually required to be measured through different aspects and approaches. The instrument validity can be evaluated with the help of statistical validity thereby resulting in the internal and structural validity.

5.7.2 Internal Validity:

This is assumed to be the first statistical test or the first check point in order to test the validity of the instrument. Thsi can be done with the help of the scouting sample may consit of 40 responses or respondents for measuring the correlation cofficients of each item in entire fields or only in one field.

5.7.3 Composite Reliability:

Reliability is the degree of consistency of an instrument (Kerlinger & Lee, 2000). The reliability of the instrument or its factors was established using composite reliability (CR), orrho. As opposed to Cronbach's alpha as a measure of reliability, Raykov (2004) believes that a composite reliability estimate is a more reliability estimate than Cronbach's alpha because unlike Cronbach's alpha, a composite reliability estimate does not assume the equality of the error or loading terms of instrument items. Like Cronbach's alpha estimate, the acceptable standard minimum threshold for composite reliability is 0.7 (Guo, Yiu & González, 2016).

An instrument's reliability is its degree of consistency that tests its attribute of the measurement is expected to be (George and Mallery, 2006). The lesser the variations of an instrument in its repeated mesurements of a particular attribute the higher is considered to be its reliability. The reliability of any instrument can be measured and equated in terms of its stability dependability and consistency. The tests can be

administered to a particular sample at times may be twice or thrice and the final results can be computed or calculated for its realibility cofficient (George and Mallery, 2006). Chronbach aplha should be applied to the data set in oredre to test and ensure the realiability of that data set.

5.7.4 Convergent Validity:

Convergent validity indicates the extent to which a latent construct is well explained by its observed variables or items; a scale is said to have a high convergent validity if items of the construct commonly share a high proportion of variance (Hair, 2006). Convergent validity in this study was assessed by examining the loading factors and "Average Variance Extracted" (AVE). The standardized loading value must be higher than 0.7, AVE greater than 0.5 explain best fit for convergent validity.

5.7.5 Discriminate Validity:

Discriminate validity explains how one construct is actually different from other constructs (Henseler, Ringle & Sarstedt, 2014). The six latent variables or factors in this study were tested for discriminate validity based on Hair, Black, Babin, &Anderson's (2010) requirements. According to Hair et al., 2010, the square root of Average Variance Explained for a factor should be greater than correlations; AVE should be greater than Average Shared Variance (ASV); and Maximum Shared Variance (MSV) should be less than AVE.

5.7.6 Structural Validity of the questionnaire:

To test the validity of any instrument/ questionnaire the second step which can be undertaken or second test which can be administered is structural validity by testing the validity of entire questionniare or of that of each filed. The main purpose of this is to measure the correlation among one field or of that of the all fields of the questionnaire having same levels at the likert point scale.

5.7.7 Effect Size and Power of Test:

Power testing of hypothesis testing is the probable chances of retaining the proposed null hypothesis and proposing to make the alternative hypothesis false (Schumacker and Lomax, 1996). According to Schumacker and Lomax, exploring the power and effect size is not so comfortable through SEM due to different variables or considering parameter estimates. This appears to be the reason why power and effect size are hardly reported in SEM-based research. However, post-hoc power of tests and effect sizes for testing the hypothesis in the context of available alternative models – were calculated in this study using G*power 3 (Faul, Erdfelder, Lang & Buchner, 2007).

5.8 Ethical Issues:

Formal approval letters to conduct this study were received from the Research Committee of the Department of Management & Studies of the Lovely Professional University. The questionnaire had a cover sheet that assured the respondents of confidentiality, anonymity of their responses, the voluntary fundamental of this study, and choices to withdraw their participation from the study would not affect the travellers who use different airlines.

To ensure anonymity, there was no requirement for respondents to indicate their names or identification numbers on the survey. The researcher ensured confidentiality by making sure that the questionnaires were collected immediately after they were completed. For those respondents who could not complete their questionnaires immediately, sealed collection boxes were provided for them to drop their completed questionnaires.

5.9 Research Design:

The current research explored through descriptive, and non-experimental correlational study which was appropriate to investigate the hypothesized relationships among variables (Creswell, 2008). Also, with the help of structural equation modelling (SEM) and Process micro the data analysis is done. SEM was an analytic approach for testing a theory and for analysing multivariate data (Savalei & Bentler, 2010). SEM provided a

flexible way to understand the specified relationships between 'observed'/ 'measured' and 'latent variables' and to examine the relationships among latent variables (Savalei & Bentler, 2010; Wang & Wang, 2012). This study used "two-step structural equation modelling" (SEM) with " confirmatory factor analysis" (CFA); Anderson & Gerbing, 1988). Unlike exploratory factor analysis (EFA), which explores the nature of underlying factors without specific expectations, CFA is used to examine whether models align with specific expectations (Thomson, 2004). CFA explored the measurement model by examining the observed and latent variables associated with constructs of interest: engagement in branded online communities through apps, brand attachment, brand experience, brand equity. The structural model focuses on assessing the relationships among the latent variables in their search models.

5.10 Data Preparation for Analysis:

To draw valid conclusions from the confirmatory factor analyses (CFA) and structural equation models (SEMs), Process plug in were important that data should be appropriately prepared, and their searcher provided the details of data preparation (Kline, 2015). The data preparation involved examination of (1) sample size, (2) incomplete and missing data, (3) outliers and normality, and (4) linearity and multi-collinearity. IBM-SPSS version 21.0 for Windows was used for the data preparation process.

5.11 Structural Equation Modelling (SEM)

SEM is used for the data analyses, since the framework or model that this research tested had several latent constructs, variables, and parameters to be estimated. This is in contrast to basic inferential statistical methods, such as bivariate correlation, independent and dependent t-test, linear regression and analysis of variance (ANOVA) that utilize fixed independent and also dependent variables (Hoyle, 2012). Thus, these were not the primary statistical methods to choose when testing interdependencies among several variables. Furthermore, although ANOVA and multiple regression analyses can accommodate multiple dependent variables, they are limited in how the relations between those variables are specified (Hoyle, 2012). A further advantage of SEM over the

traditional multivariate analysis procedures is that in traditional multivariate analysis procedures, variables can be independent or dependent, but not both; this limits the number of predictions possible with these variables. On the other hand, strictly speaking, SEM has no dependent or independent variables: endogenous variables may be used as exogenous variables capable of predicting the other endogenous variables (Hoyle, 2012).

Traditional multivariate data analysis procedures, such as multiple regression analysis, general linear model, and discriminate analysis do not take measurement error into consideration. Applying these traditional multivariate analysis methods where there are potential sizeable measurements errors may ultimately lead to serious inaccuracies (Byrne, 2003). Byrne further stresses that such inaccuracies are eliminated when SEM analyses are used because SEM analyses incorporate measurement errors when statistically analysing data.

According to Hoyle (2012), the integration of the two constitutes the main strength of SEM. Finally, Byrne emphasizes that there are no prevalent and easily functional substitute methods are for modelling multivariate relationships or for estimating direct or indirect effects other than using SEM data analysis procedures. Based on these reasons, SEM was used for inferential data analysis in this study.

5.11.1. Testing SEM Assumptions:

SEM is a general case of multiple regression analysis, a parametric test, and therefore carries similar assumptions (Malone & Lubansky, 2015). Therefore, the data collected were tested to ensure they met the following multiple regression assumptions before parametric-SEM-based data analyses were conducted.

Assumptions 1 and 2 were met by using a Likert scale of 5 points. Assumptions 3 to8 were tested by running multiple regressions using consumers' SNSs based online communication through branded mobile apps (independent variable), consumers' brand attachment (dependent variable), and brand equity and brand experience as a mediator to the relationship between dependent and independent variable, and consequences of dependent variable in terms of brand satisfaction, brand loyalty, brand vocal ability of the

customers. The moderating variables, authenticity of the brand, consumers' attitude and their trust on brand, were not included in the regression equation because they were neither dependent nor independent variables. Prior to running the regression analysis, respondents' scores on each of the latent variables were transformed into composite mean scores. The composite mean scores were used to run the regression analysis using Process micro.

Assumption 3, independence of observations, was confirmed using Durbin-Watson statistic produced as part of the multiple regression analysis. The Durbin-Watson statistic ranges from (0 to 4); a value of approximately 2 indicates that there is no correlation between residuals. This implies independence of error or residuals (Laerd, 2017). Linear relationship between the exogenous variable and the endogenous variables was examined using partial regression plots between each exogenous and endogenous variable. However, the examination of the various plots for normality assumption is highly subjective and tasking.

The assumption of homoscedasticity is that the residuals are equal for all values of the predicted endogenous variable. Homoscedasticity is desirable because it is not expected that the variance of the dependent variable should be concentrated within a limited range of the independent values (Hair et al, 2016). The plot of the studentized residuals (SRE_1) against the unstandardized predicted values (PRE_1) was to check for heteroscedasticity. If there is heteroscedasticity, the spread of the residuals would increase or decrease as it moves along the predicted value axis to form a "funnel" or "fan" shape. If there is homoscedasticity, the spread of the residuals will not increase or decrease as you move along the predicted values (Laerd, 2017).

Multicollinearity occurs when there is a linear dependence among the endogenous variables: this implies that one has some endogenous variables that are highly correlated with each other (Hair et al, 2016; Malone & Lubansky, 2015). The situation makes it impossible to understand which variable contributes to the variance explained in the model (Laerd, 2017). Multicollinearity was checked by examining the correlation matrix for correlations of 0.9 and above and inspected the tolerance value/variance inflation factor (VIF) produced as part of multiple regression analysis. Correlation coefficients of

0.9 or above imply the presence of multicollinearity; a tolerance value of less than 0.1 or a VIF of greater than 10 implies a collinear issue (Laerd, 2017; Field, 2005). A multicollinearity problem may result from analyst error and carelessness in data preparation. Where this is found to be the cause of the problem, one of the simplest solutions to the problem of multicollinearity would be to drop one of the collinear variables. However, in mediation studies, multi collinearity is expected and cannot be avoided (Kenny, 2016). According to Frost (2013), a VIF of 5.0 or greater implies a serious multicollinearity issue, and one way of overcoming this problem is cantering the variables by subtracting the mean from the variables.

Outliers or influential data points are data values that are extreme or atypical on either endogenous or exogenous variables or both (Ho & Naughter, 2000). In multivariate analysis, two types of outliers exist: univariate outliers and multivariate outliers (Fields, 2005). Univariate outliers have atypical data points on single variable and multivariate outliers have extreme scores on multiple variables. Univariate outliers were checked by inspecting the box plots, scatter-plots and histograms. Multivariate outliers are checked for using AMOS software to examine the values of Mahalanobis distance (d2). Multivariate outliers are said to exist for all observations or records with P1 values less than 0.05 (Gaskin, 2016). This implies that the correlations between variables for these responses are significantly different or abnormal when compared to the rest of the data set (Gaskin, 2016).

Leverage values were checked by examining the variable LEV_1 that was created during multiple regression analyses. Cases with leverage values less than 0.2 are safe; cases with leverage values 0.2 to less than 0.5 are risky cases; cases with leverage values of 0.5 and above are dangerous (Laerd, 2017). Similarly, influential points were checked by examining variable COO_1 in the data file that is produced by selecting the Cook's option during regression analyses. Cook's Distance values above 1.0 need to be investigated, where Cook's distance is a measure of influence (Laerd, 2017).

On finding outliers, leverage values, or influential points that are of major concern, one could consider explaining them, removing the cases with these problems or accommodating them by using robust statistics for data analysis. Gaskin (2016) asserts

that it is very difficult to justify removing multivariate outliers because they do not simply match one's model: this is tantamount to forcing the data to fit the proposed model instead of freely allowing the model to fit the data. He further states that multivariate outliers nearly always exist. Even if one removes them, more outliers will show up.

Univariate and multivariate data normality assumptions also need to be tested in SEM. Examination of the partial plots of the variables would indicate whether the assumption of univariate data normality has been violated, and inspection of the normal Q-Q Plot of Student zed Residual and the normal P-P Plot of Regression Standardized Residual would indicate whether the residuals were normally distributed. The above normality tests were augmented by using AMOS software to check for kurtosis values of seven or above, which indicates univariate sample data departure from normality (West, Finch, and Curran, 1995). Using AMOS software, multivariate normality was double-checked by examining Mardia's (1970, 1974) normalized estimate of multivariate kurtosis. Normalized estimates greater than 5.00 indicate that data are not normally distributed (Bentler, 2005).

Nevertheless, the violation of normal distribution assumptions does not affect exogenous or antecedent variables, as the default maximum likelihood estimation (MLE) method does not affect incorporated distributional assumptions for exogenous variables (Eliason, 1993). But endogenous (mediating and outcome) variables that are not normally distributed are problematic. According to Malone and Lubansky (2015), the solution to non-normality is the use of an alternative estimation method to maximum likelihood examination (MLE), such as Asymptotic distribution-free (ADF) estimation (Browne, 1984), rather than data transformation.

However, ADF estimation requires extremely large sample sizes (1000 to 50000); otherwise, it performs poorly and yields severely distorted estimated values (Hu, Bentler, &Kano, 1992; West et al., 1995, Dubey. R. et. al, 2015). Alternatively, Kline (2011) suggests that AMOS bootstrapping method can also be used for testing data based on non-normal data. This study used MLE and bootstrap method for testing of the structural

models and hypothesized substantive relationships. This implies that potential violation of the assumption of normal distribution was not really an issue in this study, since it was taken care of by these methods of estimation.

5.12 Model Specification:

Model specification entails defining and mapping-out every relationship and parameter in the theoretical model that interests the researcher. As the name implies, model specification should be based on theoretical background from literature review. Model misspecification could yield biased parameter estimates and lack of goodness-of-fit.

According to Hoyle (2015), the goal of model specification is not to provide full account of the data but to present a model that offers a parsimonious and useful account of data; bearing in mind that since all models are approximations of real word dynamics that produce the data, it means that all models are to an extent incorrect (MacCallum, 2003). However, based on the theoretical foundation established through literature review, the model for this dissertation was specified as shown in Figure 4.2.

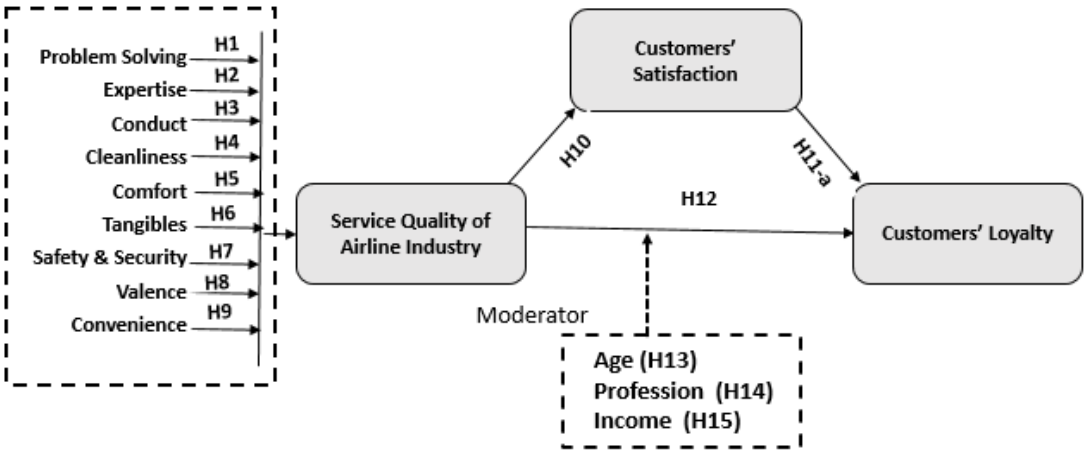


Figure 5.2: Conceptual model for the study

5.13 Model-Fit Testing:

Before testing for the relationships between parameters and moderating effects in SEM, it was confirmed that the sample's data fit the theoretical model; that is, the measurement model's construct validity was confirmed. This validity was ensured by assessing the similarity of the estimated theoretical covariance matrix to the observed matrix (Hair et al, 2016). Chi-square ($\chi 2$) statistic is the basic SEM's goodness-of-fit (GOF) measure to estimate the similarities between the covariance matrices (Byrne, 1998). However, increase in sample size makes the $\chi 2$ statistic produce erroneous results (Hair et al, 2016). Because of this, many GOF indices have been invented, and $\chi 2$ statistic is no longer used as the only GOF measure.

These indices have been broadly classified into three major categories: absolute measures, incremental measures, and parsimony fit measures (Hair et al, 2016). Hair et al (2016) further recommend that using three to four fit indices provides evidence of model fit; the researcher should report at least one incremental index and one absolute index, in addition to the $\chi 2$ statistic value and degree of freedom.

Thus, in addition to reporting the $\chi 2$ statistic value and degree of freedom, the normed chi-square (CMIN/DF or $\chi 2/df$), which is the ratio of $\chi 2$ to the degrees of freedom; the root mean square error of approximation (RMSEA); and the comparative fit index (CFI) were equally reported. RMSEA is one of the most widely used GOF to correct for the tendency of $\chi 2$ to reject models with a large sample (Hu & Bentler, 1999). CFI is an incremental fit index that is relatively insensitive to model complexity (Hair et al., 2016). A non-significant $\chi 2$ statistic value, CMIN/DF values below 3.0, RMSEA values below .08, and CFI values above .90 usually indicate a well fitted model (Hair et al, 2016).

5.14 Model Modification:

It is very rare for a researcher to terminate research based on a rejected model, considering the costs of data collection: the researcher goes ahead to generate a model that better fits the sample data (Byrne, 2016). According to Hu and Bentler (1998), a

model is considered unfit and subject to modification if it fits the data but has excessive parameters (over-parameterization), or the model does not fit the data (under-parameterization).

The proposed model showed a good fit to the data; however, after testing the hypothesized relationships, some relationships were found to be weak and not significant. Therefore, using the results of tests of hypotheses, the hypothesized model was constrained by deleting the relationships that were not significant to form a nested model with the hypothesized model. The new model was tested for model fit and compared with the hypothesized model.

5.15 The Choice of SEM Software & Adanco:

Organizational, psychological, safety, and social sciences literature shows different SEM software being used by researchers; however, AMOS software appears to be the most frequently used (Gou et al 2016; Wachter & Yorio, 2014). This may underscore the importance of the SEM procedure over the specific SEM programs and points to the commonalities among the various SEM programs. This notwithstanding, SPSS AMOS Version 18 software was used for data analysis in this study. The choice of this program was based on preferences and the need to work in SPSS augmented environment. For R^2 analysis, and direct, indirect effect Adanco software is used in this study.

5.16 Data Analysis:

5.16.1 Data Analysis Method:

The data collected were analyzed descriptively and inferentially. IBM Statistical Package for Social Sciences (IBM SPSS) Software Version 24 (Arbuckle, 2016) was used for descriptive statistical data analysis, and structural equation modeling software, AMOS Version 24, was used for inferential statistics of testing the model and Process-micro for the hypotheses.

5.16.2 Data Entery and Coding:

AMOS is an SEM software and an add-on purchase in the IBM SPSS statistical package. Data entry and coding was done using SPSS; the data were later imported into AMOS environment for confirmatory factor analysis, pooled CFA, and imputed values of all constructs were imported into Process-micro for hypothesis testing.

5.16.3 Descriptive and Inferential Statistical Data Analysis:

Laerd (2017) defines descriptive statistics as the analysis of data that helps describe, show and present data in a meaningful way. Inferential statistics are techniques that allow one to use representative samples' data to make meaningful generalizations about the population from which the samples were drawn. Prior to making any data analysis, missing cases were identified because statistical analysis of data is affected by missing data. Roth (1994) and Schumacker and Lomax (1996) suggest the use of list-wise deletion of cases or mean substitution when missing data is 5% or less. Alternatively, maximum likelihood estimation method that makes use of available data, as available in AMOS program, could be used for parameter estimation (Little & Rubin, 1987). List-wise deletion of cases was used in this study because the proportion of cases with missing data was less than 5%. Maximum likelihood estimation method was then adopted after list-wise case deletion.

Descriptive statistic measures of central tendency and measures of dispersion such as standard deviation, mean, and frequency, stratified according to demographic variables (gender, age, and work experience), were used to offer information and trends on the nature of the sample data. Also, a correlation table was produced that comprises the study variables and the socio-demographic variables.

Inferential statistical data analyses were performed using SPSS AMOS Version 24. The inferential statistical tests done included testing the measurement model, the structural model, and the substantive relationships.

5.16.4 Testing the Confirmatory Model

Because the survey instruments used in this research were adapted from other research, it was imperative to “confirm” that the key latent variables in this study were actually distinct from each other. It is conventionally important to assess the fit of the sample data to the proposed measurement model before testing other substantive relationships.

Therefore, a confirmatory factor analysis (CFA) was performed using AMOS Version 24 (Arbuckle, 2016), with the covariance matrix and maximum likelihood estimation method. CFA is theory driven (McDonald, 1978); this informed its choice in testing the measurement model where theories behind the latent variables in this study had already been established through exploratory factor analysis in different cultures, but needed to be reconfirmed in a different (Indian) culture.

Prior to testing the entire measurement model, it was important to investigate the unidimensionality of the scales. Hair et al. (1992) refers to unidimensionality of a measure as the existence of a measure that defines one and only one single construct. Unidimensionality of the instrument used to assess the constructs of SNS's based online communication through branded mobile apps, brand experience, brand equity, brand attachment in this study was assessed using Comparative Fit Index (CFI).

For the proposed measurement model, each individual questionnaire item was loaded onto its respective higher order factor (SNS's based online communication through branded mobile apps, brand experience, brand equity, brand attachment). The higher order factors, the latent variables, were allowed to correlate or co-vary. Scaled factor loading of indicators to latent variables was set to 1.00 in order to scale the latent variables. Item wording similarities and measurement artefacts variance were accounted for by allowing similarly worded items to correlate, and ensuring that negatively worded items were properly recoded.

Having ensured unidimensionality of the individual measures, the entire measurement model was tested for model-fit to the sample’s data. This involved co-varying the highest order factors in each model and estimating the variables. The measurement model was

assessed for fit using commonly used model goodness-of-fit and badness of fit criteria, such as chi-square ($X2$), CMIN/DF, CFI, and RMSEA. Where there was poor data fit between the proposed measurement model and sample data, modification indices and residuals from AMOS output data were used as guides to improve the model. In which case, items with low factor loadings were dropped in the CFA to ensure that loadings relating indicators to latent factors were statistically significant ($P < .05$), or two items' errors with high modification indices that load on the same factor were co-varied, or correlated items above .4 were removed.

5.16.5 Testing the Structural Model

In a summary of general frameworks for testing structural equation models, Jöreskog (1993) has identified three scenarios: strictly confirmatory, alternative models, and model generation. A perusal of safety, management, and psychology literature clearly indicates model generation is the most prevalent of the three scenarios and the strictly confirmatory case is rarely found in literature. According to Byrne (1996), the reason for the prevalence of model generation over the other scenarios is because it would be rare to find a researcher who would terminate a research simply on the basis of a rejected hypothesized model, considering the cost associated with collection of sample data. Therefore, when a hypothesized model is rejected due to lack of model fit, the researcher invokes the model generation scenario.

Based on the preceding discussions, this research was based on a model generation scenario. After testing the proposed model fit using $X2$, CMIN/DF, CFI, RMSEA, and the hypotheses, a nested model was developed by removing the insignificant paths. This model was tested for fit and compared with the hypothesized model.

5.16.6 Testing of Hypotheses:

Four distinct groups of hypotheses were tested in this study:

1. One model fit testing hypothesis
2. Two correlation or association-related hypotheses

3. Three relationship or prediction-related hypotheses
4. One mediation-related hypotheses
5. One moderation related hypotheses

The model-fit hypothesis was tested using simultaneous equation modelling, SEM, to check if there was a statistically significant difference between the sample data's variance-covariance matrix and the generated model-implied variance-covariance matrix. Maximum likelihood estimation method using AMOS SEM software was adopted.

The two correlation or association-related hypotheses were tested using Pearson bivariate correlation on the affected data's composite mean scores, after ensuring that the data met parametric assumptions tests. Additionally, a correlation table for key study variables was produced.

The two relationship or prediction-related or direct effect hypotheses, hypotheses HD and HE, were tested by having the model-fit with the moderators (cognitive and emotional engagement) isolated. That is, the SEM model was run with only the antecedent and outcome variables, as shown in Figure 5.2. In this scenario, there was no influence of competing pathways, as every pathway was unidirectional isolated. The AMOS estimation output data was examined to check whether the direct effect of the antecedent variables on the outcome variable was significant or not significant.

5.17 Summary:

For reasons already explicated, descriptive, cross-sectional, and convenience research methods were used in this dissertation. The adapted instruments were validated before they were used to collect data. The internal validity, composite reliability, convergent validity, discriminate validity, structural validity of questionnaire were checked and found to be as per confirmation. The research design, SEM, SEM assumptions were tested to ensure that it met the multiple regression assumptions i.e. Outliers, leverage values, univariate and multivariate data. SPSS version-24 was used for

descriptive data analyses, and AMOS Version-24 was used for models' fit analyses and inferential statistics, including the testing of hypotheses. The next chapter presents the results of the data analyses, in line with the research method.

Chapter 6: Data Analysis

6.1 Data Cleaning:

SEM is a correlation method and the 'missing data', 'outliers', 'non-normality' and 'nonlinearity' of data can hamper the results and also affect the variance and co-variance of variables which can results in affecting the results of SEM analysis. Schumacker and Lomax (2004) argued that data screening is a very important first step in structural equation modelling.

The data analysis is advanced with the data examination and identifying and handling of missing data as the analysis can be greatly affected by the missing data. For the better administering of SEM analysis and having its accurate results the requirement is having a complete data set in all respects but unfortunately most the statistical analysis and studies of this kind invariably have missing data in one or the other aspect. There is so many options available these days with the researcher and with the help of these the researcher can tackle with the missing data, can delete the missing values and can also replace such missing values with the help of robust techniques available these days. SEM software have plenty of such options to deal with the missing data but this can reduce the size of the effective data set which ultimately can hamper the sample size of the study, and can also lead to a biased sample if the deleted data differs to the data which contain the complete data (Malhotra, 1988).

While examining the completeness of returned questionnaire, 27 responses were found missing on data values especially on the Likert scale items. Such responses were excluded from further analysis. In order to have high precision on data, double check was performed. In the first check, the data were cross checked case by case and in the second check frequency distribution were calculated to see any missing data.

Further, the most fundamental assumption in multivariate analysis is the assumption of normality. The estimation techniques in SEM assumes that data is being drawn from a

continuous and multivariate normal population (Ullman, 1996; Kaplan, 2000). Multivariate normality may be defined as the shape of data distribution to individual metric variable and its relation to the normal distribution (Hair et al, 2006).

The most simple and effective test for testing the normality is visual inspection of histogram which compares the observed data values with a distribution approximating the normal distribution (Hair et al, 2006).

The Skewness and Kurtosis for each variable is also been calculated by the SPSS. Skewness refers to the index which shows the symmetry of univariate distribution, while Kurtosis deals with the shape of distribution in its peakedness. The extreme values for both signify that the data is not been normally distributed. The extreme values for both are greater than +3 or less than -3, whereas in case of normality the value of univariate skewness and kurtosis should be zero (Raykov and Marcoulides, 2000). Violation of these assumptions and values can for sure hamper and invalidate the hypothesis testing such that normal theory test may or may not reflect the adequate evaluation of the model (Byrne, 2001). The small variation in multivariate normality can lead to huge differences in the results of Chi-square test thereby undermining its utility. However, maximum likelihood estimation is not as sensitive to non-normality as previously thought (Anderson and Gerbing, 1988).

The results of Skewness and Kurtosis tests depicted that the data used in the present research has been taken to be normally distributed, and the results are represented in Table 6.1.

Table 6.1: Skewness and Kurtosis Values

Construct	Items	Mean	Std. Devi.	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Tangibles (4)	TAN1	2.96	1.025	-.024	.096	-.922	.192
	TAN2	3.43	.918	-.557	.096	-.260	.192
	TAN3	2.85	1.071	.132	.096	-.829	.192
	TAN4	2.96	1.054	-.012	.096	-1.023	.192
Safety & Security (3)	SS1	3.91	.751	-.670	.096	.824	.192
	SS2	3.93	.710	-.471	.096	.530	.192
	SS3	3.91	.721	-.363	.096	.211	.192
Cleanliness (3)	CLE1	3.63	.842	-.550	.096	.074	.192
	CLE2	3.59	.876	-.495	.096	.188	.192
	CLE3	3.74	.799	-.840	.096	1.105	.192
Comfort (3)	COM1	3.46	.940	-.539	.096	-.015	.192
	COM2	3.61	.900	-.727	.096	.351	.192
	COM3	3.61	.907	-.549	.096	-.010	.192
Expertise (3)	EXP1	3.99	.616	-.793	.096	2.215	.192
	EXP2	3.87	.678	-.574	.096	.781	.192
	EXP3	4.10	.611	-.586	.096	1.737	.192
Conduct (5)	CON1	2.78	1.056	.325	.096	-.748	.192
	CON2	2.79	1.089	.186	.096	-.886	.192
	CON3	2.69	1.042	.363	.096	-.601	.192
	CON4	2.70	1.079	.214	.096	-.894	.192
	CON5	2.72	1.081	.322	.096	-.813	.192
Problem Solving (3)	PSO1	3.85	1.027	-.790	.096	.048	.192
	PSO2	3.85	.990	-.711	.096	-.081	.192
	PSO3	3.88	.981	-.722	.096	.070	.192
Information (3)	INF1	3.94	.994	-.903	.096	.300	.192
	INF2	3.97	.971	-1.078	.096	1.000	.192
	INF3	3.95	.999	-.995	.096	.595	.192
Convenience (3)	CONV1	2.81	1.071	.298	.096	-.902	.192
	CONV2	2.78	1.106	.166	.096	-1.001	.192
	CONV3	2.68	1.085	.395	.096	-.818	.192
Customer Loyalty (4)	CL1	3.97	.835	-.979	.096	1.476	.192
	CL2	3.94	.840	-.843	.096	.895	.192
	CL3	3.89	.873	-.801	.096	.880	.192
	CL4	3.61	.939	-.489	.096	-.257	.192
Customer Satisfaction (3)	CS1	3.66	1.036	-.633	.096	-.298	.192
	CS2	3.59	1.129	-.554	.096	-.591	.192
	CS3	3.57	1.142	-.462	.096	-.704	.192

6.2 Cronbach's Alpha for every constructs:

Cronbach‟s alpha (George & Mallery, 2006) is designed as a measure of internal consistency, that is, do all items within the instrument measure the same thing? The normal range of Cronbach‟s coefficient alpha value between (0.0 and + 1.0}, and the higher values reflects a higher degree of internal consistency. The Cronbach‟s coefficient alpha was calculated for each field of the questionnaire and documented in Table 6.2.

Table 6.2 reflects the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from (0.82 and 0.93). This range is considered high; the result ensures the reliability of each field of the questionnaire. The Cronbach's Alpha value if items deleted are computed in Table 6.3 to Table 6.13.

Table 6.2: Cronbach's alpha Values

Tangibles -TAN (4)	0.83
Safety & Security - SS (3)	0.84
Cleanliness-CLE (3)	0.82
Comfort-COM (3)	0.86
Expertise – EXP (3)	0.76
Conduct - CON (5)	0.93
Problem Solving - PSO (3)	0.89
Information - INF (3)	0.90
Convenience CON (3)	0.91
Customer Loyalty - CL (4)	0.84
Customer Satisfaction CS (3)	0.77

Table 6.3: Tangibles

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TAN1	9.25	6.459	.680	.780
TAN2	8.78	7.102	.634	.802
TAN3	9.36	6.193	.696	.772
TAN4	9.25	6.496	.641	.798

Table 6.4: Safety & Security

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SS1	7.84	1.740	.658	.822
SS2	7.82	1.724	.739	.743
SS3	7.84	1.731	.715	.766

Table 6.5: Cleanliness

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CLE1	7.34	2.302	.634	.777
CLE2	7.38	2.118	.684	.727
CLE3	7.23	2.328	.682	.731

Table 6.6: Comfort

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
COM1	7.22	2.901	.661	.874
COM2	7.07	2.707	.804	.739
COM3	7.08	2.810	.745	.794

Table 6.7: Expertise

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EXP1	7.96	1.197	.650	.608
EXP2	8.09	1.172	.558	.716
EXP3	7.86	1.296	.563	.704

Table 6.8: Conduct

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CON1	10.89	15.129	.756	.927
CON2	10.89	14.368	.835	.913
CON3	10.98	14.551	.857	.909
CON4	10.97	14.471	.830	.914
CON5	10.96	14.551	.816	.916

Table 6.9: Problem Solving*:*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PSO1	7.73	3.287	.812	.819
PSO2	7.73	3.520	.772	.854
PSO3	7.70	3.559	.770	.856

Table 6.10: Information:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
INF1	7.92	3.361	.799	.846
INF2	7.89	3.541	.761	.878
INF3	7.91	3.290	.821	.826

Table 6.11: Convenience

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CONV1	5.46	4.314	.788	.887
CONV2	5.49	4.046	.831	.851
CONV3	5.59	4.153	.822	.859

Table 6.12: "Customer Satisfaction"

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CL1	11.45	4.288	.611	.678
CL2	11.48	3.996	.714	.621
CL3	11.52	3.990	.672	.641
CL4	11.80	4.968	.298	.846

Table 6.13: "Customer Loyalty"

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CS1	7.15	4.627	.768	.885
CS2	7.23	4.048	.837	.825
CS3	7.25	4.099	.804	.855

6.3 Rotated Component matrix:

As per the rotated component matrix table all the items are falling in respective construct, as their correlation is very high with the items of the same construct. This shows that we have eleven constructs to consider in this study which is reconfirmed by the table.

Table 6.14: Rotated Component Matrixes

	Component										
	1	2	3	4	5	6	7	8	9	10	11
TAN1	.013	.639	.110	-.019	.026	.143	-.004	.029	-.003	.058	.588
TAN2	.102	.817	.126	.214	-.039	.097	.071	-.021	.075	.159	.054
TAN3	.074	.805	.053	.121	-.060	.108	-.006	.029	-.011	.192	.037
TAN4	-.017	.835	.131	.193	-.028	.052	-.004	.100	-.049	.045	.062
SS1	-.002	.191	.136	.344	.026	.093	.076	.054	.107	-.022	.779
SS2	.104	.439	.211	.494	-.046	.022	.152	.032	.211	.089	.282
SS3	.104	.303	.154	.530	-.038	.068	.090	.068	.209	.196	.243
CLE1	.063	.044	.096	.014	.045	.025	.078	.833	.097	.081	-.038
CLE2	.051	.075	.037	.064	-.004	-.102	.112	.787	.247	.087	.031
CLE3	.044	.001	.059	.094	-.016	-.015	.051	.807	.184	.096	.112
COM1	-.069	.012	.041	.044	.039	.000	.818	-.001	.040	-.022	-.016
COM2	-.013	-.024	.019	.027	.023	.000	.893	.091	.032	.002	.051
COM3	-.020	.086	-.013	.003	.013	.112	.851	.133	.011	.037	.007
EXP1	.013	-.028	-.020	.032	-.011	.027	-.008	.109	.843	.086	.049
EXP2	.032	-.024	.088	.049	-.019	-.002	.038	.181	.762	-.034	.017
EXP3	.033	.091	-.077	-.009	.028	.038	.050	.157	.772	.006	.027
CON1	.887	.064	.000	.055	.028	.036	-.025	.001	.041	.040	.161
CON2	.927	.045	.036	.049	.036	.041	-.021	.013	.040	.065	.008
CON3	.927	.045	.005	.077	.049	.031	-.018	.015	.035	.062	-.054
CON4	.857	.000	.062	.012	.059	.032	-.034	.156	-.025	.089	-.046
CON5	.923	.046	.034	.068	.059	.058	-.021	-.001	.017	.015	.004
PSO1	.025	.055	-.009	-.005	.034	.893	.043	-.030	.011	.015	.233
PSO2	.061	.152	.026	.109	.005	.880	.052	-.032	-.001	.005	-.018
PSO3	.095	.084	-.002	.175	.024	.860	.022	-.019	.061	.086	.000

INF1	**.073**	**-.058**	**-.020**	**-.032**	**.904**	**.058**	**.045**	**-.010**	**.044**	**-.030**	**.021**
INF2	**.073**	**-.037**	**-.012**	**.018**	**.886**	**.035**	**.009**	**.024**	**-.026**	**.016**	**-.008**
INF3	**.056**	**-.015**	**-.017**	**-.042**	**.921**	**-.036**	**.025**	**.016**	**-.020**	**-.043**	**-.010**
CONV1	**.017**	**.105**	**.876**	**.051**	**.007**	**.022**	**.025**	**.076**	**-.004**	**.075**	**.305**
CONV2	**.054**	**.177**	**.902**	**.181**	**-.018**	**.003**	**.027**	**.053**	**-.012**	**.103**	**.011**
CONV3	**.056**	**.114**	**.863**	**.229**	**-.046**	**-.008**	**.007**	**.099**	**.007**	**.134**	**-.029**
CL1	**.062**	**.072**	**.083**	**.082**	**-.046**	**.069**	**-.039**	**.029**	**.072**	**.533**	**.668**
CL2	**.145**	**.273**	**.132**	**.143**	**-.098**	**.036**	**.046**	**.047**	**.115**	**.678**	**.189**
CL3	**.099**	**.199**	**.061**	**.294**	**-.046**	**.046**	**.011**	**.029**	**.067**	**.787**	**.110**
CL4	**.041**	**.043**	**.142**	**.151**	**.077**	**.024**	**-.023**	**.295**	**-.111**	**.685**	**-.102**
CS1	**.010**	**.018**	**.109**	**.621**	**.021**	**.200**	**-.018**	**.089**	**-.102**	**.057**	**.463**
CS2	**.116**	**.263**	**.172**	**.695**	**-.036**	**.083**	**.070**	**-.021**	**.018**	**.247**	**.027**
CS3	**.075**	**.148**	**.131**	**.804**	**-.016**	**.096**	**-.041**	**.121**	**-.013**	**.200**	**.001**
Extraction Method: "Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.											
a. Rotation converged in 8 iterations."											

6.4 Hypothesis Related to Demographic & Dependent Variable

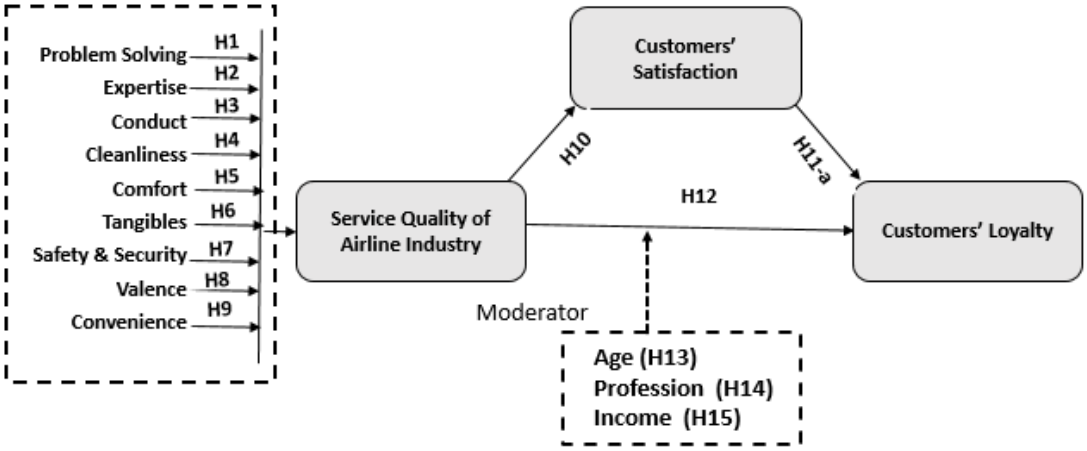


Figure 6.1: Conceptual Model with Control variables

According to Figure 6.1, the formulated hypotheses are as follows:

H1: Problem solving quality leads Airline Industry to have better Service Quality.

H2: Expertise quality leads Airline Industry to have better Service Quality.

H3: Conduct quality leads Airline Industry to have better Service Quality.

H4: Cleanliness quality leads Airline Industry to have better Service Quality.

H5: Comfort quality leads Airline Industry to have better Service Quality.

H6: Tangibles quality leads Airline Industry to have better Service Quality.

H7: Safety & Security quality leads Airline Industry to have better Service Quality.

H8: Valence quality leads Airline Industry to have better Service Quality.

H9: Convenience quality leads Airline Industry to have better Service Quality.

H10: Service quality of Airline Industry has a significant effect on customer satisfaction.

H11-a: Customer satisfaction has a significant effect on customer loyalty in aviation industry.

H11-b: Customer satisfaction mediates the relationship between Service quality of Airline Industry and customer loyalty.

H12: Service quality of Airline Industry has a significant indirect effect on customers' loyalty in the presence of customer satisfaction.

Moderation of Customers' Demographic on the conceptual model:

H13: Age of the customers' moderator the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H14: The Profession of customers' moderator the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H15: The income of customers' moderator the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

6.5 The Validity Issues:

6.5.1 The Content Validity:

Content validity explains the relevancy of the measurement instrument and showcases the particular construct objectivity for specific assessment (Netemeyer et al, 2004). The content validity of study constructs can safely be assumed for better establishment, as the constructs are framed with strong literature support. In the present case, the items were carefully selected through a rigorous literature review in such a way so as to fetch maximum coverage of the study concepts. Thus selected items were then proposed before the independent experts including the supervisor for examination with respect to item wordings and their match with the intended constructs. No expert had difficulty in matching items to constructs evidencing face validity of instruments used to capture study concepts. Therefore, in present case content validity was assumed to be met satisfactorily.

6.5.2 Nomological Validity:

The nomological validity refers to the extent to which the patterns of correlation and non-correlation in a measurement model match the theoretically predicted patterns of the conceptual model, and thus make sense. Thus it checks the theoretical plausibility of the

model. To this end, use of logic and prudence must be made to ensure that CFA results are nomologically valid. In this analysis actual patterns between constructs of the measurement model are compared to the expected patterns based on the conceptual model. When there is a match and, the researchers concluded that the model is nomologically valid.

6.5.3 The Convergent Validity:

Convergent validity shows the extent to which indicators of a specific construct converge or have a high proportion of variance in common (Hair et al., 2010). Further, the magnitude of factor loadings of latent to observed variables should be above 0.50 and preferably 0.70 for convergent validity to be verified (Hair et al., 2010). As can be seen from the measurement model obtained from ADANCO output as well as the Table 6.15 below, the factor loading of all observed variables in Table 6.15 are statistically significant and above the specified criterion indicating that observed variables or items adequately reflect their respective constructs. Hence the constructs' convergent validity is considered verified. Additionally, from Table 6.16, the average variance extracted (AVE) for all the constructs are greater than 0.50 suggesting good convergence (Anderson, J.C., et al., 1988).

Further, the evidence of good convergence can be had from constructs' reliability. The reliability refers to constructs' internal consistency. To measure the reliability of a construct Composite reliability (CR) is helpful in conjunction with SEM. CR value greater than 0.70 is perfect to represent the good value of scale reliability (Fornell and Larcker, 1981, Nunnally and Bernstein, 1994). From Table 6.2**,** the composite reliability of all constructs in the measurement model are deemed reliable and therefore, appropriate for theory testing. These high reliability estimates of the study constructs further verify the convergent validity of study constructs (Hair, et el., 2006). Following table presents these values for quick reference of the reader.

Table 6.15: Factor Loading Values

Indicato	TA	SS	CL	CO	EX	CO	PS	IN	CON	CL	CS
TAN1	0.79										
TAN2	0.86										
TAN3	0.85										
TAN4	0.86										
SS1		0.8									
SS2		0.8									
SS3		0.8									
CLE1			0.83								
CLE2			0.87								
CLE3			0.87								
COM1				0.77							
COM2				0.89							
COM3				0.91							
EXP1					0.84						
EXP2					0.81						
EXP3					0.81						
CON1						0.90					
CON2						0.93					
CON3						0.93					
CON4						0.87					
CON5						0.93					
PSO1							0.90				
PSO2							0.90				
PSO3							0.90				
INF1								-			
INF2								-			
INF3								-			
CONV1									0.91		
CONV2									0.94		
CONV3									0.92		
CL1										0.7	
CL2										0.8	
CL3										0.8	
CL4										0.6	
CS1											0.8
CS2											0.8
CS3											0.8

Table 6.16: Convergent Validity

Construct	Average variance extracted (AVE)
TAN	0.70
SS	0.73
CLE	0.73
COM	0.74
EXP	0.68
CON	0.83
PSO	0.81
INF	0.77
CONV	0.85
SQMA	0.19
CL	0.59
CS	0.69

6.5.4 Discriminant Validity:

Discriminant validity explain the how one constructs' measures are different from other constructs and does not have high correlation with other construct (Sethi and King, 1994, Netemeyer et al, 2003). Second, comparing the square root of average variances extracted (AVE) for individual constructs with the inter-construct correlations associated with that construct. The root variance extracted estimate must be greater than the corresponding inter-construct squared correlation estimates (Hair et al., 2010). As can be seen from Table 6.17 the HTMT criteria is explained, and Table 6.18 explain the discriminant validity - Fornell-Larcker Criterion where the root of AVE estimates (represented by diagonal elements) for all constructs are higher than absolute between construct correlations for corresponding pairs of constructs, providing indication that discriminant validity is verified at the construct level in all cases of study constructs. Following table presents this information for quick reference.

Table 6.17: Discriminant Validity - Heterotrait-Monotrait Ratio of Correlations (HTMT)

Construct	TAN	SS	CLE	COM	EXP	CON	PSO	INF	CONV	SQMA	CL	CS
TAN												
SS	0.64											
CLE	0.13	0.28										
COM	0.08	0.18	0.21									
EXP	0.08	0.26	0.46	0.12								
CON	0.14	0.17	0.13	0.06	0.08							
PSO	0.29	0.29	0.03	0.10	0.06	0.13						
INF	0.08	0.04	0.03	0.06	0.00	0.13	0.05					
CONV	0.37	0.46	0.22	0.07	0.03	0.11	0.06	0.05				
SQMA	0.70	0.80	0.58	0.41	0.50	0.60	0.50	0.29	0.56			
CL	0.53	0.61	0.35	0.04	0.16	0.24	0.20	0.07	0.41	0.60		
CS	0.54	0.69	0.20	0.08	0.09	0.20	0.32	0.05	0.46	0.61	0.65	

Table 6.18: Discriminant Validity- Fornell-Larcker Criterion

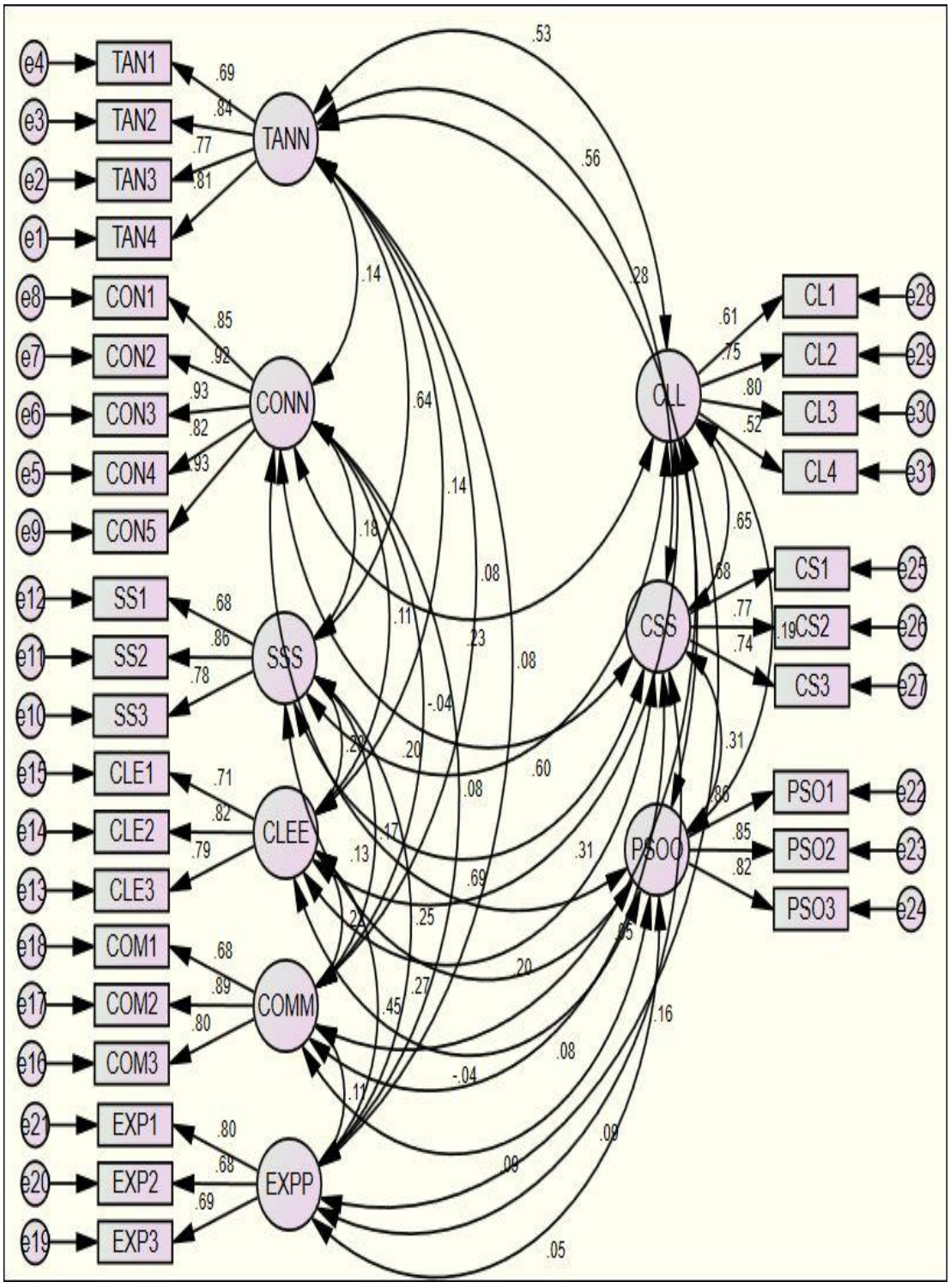
Cons	TAN	SS	CLE	COM	EXP	CON	PSO	INF	CONV	SQMA	CL	CS
TAN	0.64											
SS	0.13	0.28										
CLE	0.08	0.18	0.21									
COM	0.08	0.26	0.46	0.12								
EXP	0.14	0.17	0.13	0.06	0.08							
CON	0.29	0.29	0.03	0.10	0.06	0.13						
PSO	0.08	0.04	0.03	0.06	0.00	0.13	0.05					
INF	0.37	0.46	0.22	0.07	0.03	0.11	0.06	0.05				
CONV	0.70	0.80	0.58	0.41	0.50	0.60	0.50	0.29	0.56			
SQMA	0.53	0.61	0.35	0.04	0.16	0.24	0.20	0.07	0.41	0.60		
CL	0.54	0.69	0.20	0.08	0.09	0.20	0.32	0.05	0.46	0.61	0.65	
CS	0.64											

Table 6.19 Inter-Construct Correlations

Construct	TAN	SS	CLE	COM	EXP	CON	PSO	INF	CONV	SQMA	CL	CS
TAN	1.00											
SS	0.54	1.00										
CLE	0.11	0.23	1.00									
COM	0.08	0.15	0.19	1.00								
EXP	0.07	0.21	0.36	0.09	1.00							
CON	0.13	0.15	0.11	-0.05	0.07	1.00						
PSO	0.25	0.24	-0.02	0.10	0.05	0.12	1.00					
INF	0.07	0.07	-0.02	-0.05	0.00	-0.10	-0.01	1.00				
CONV	0.33	0.40	0.19	0.06	0.03	0.10	0.06	0.05	1.00			
SQMA	0.75	0.79	0.41	0.22	0.30	0.43	0.40	0.04	0.60	1.00		
CL	0.44	0.50	0.26	0.04	0.12	0.21	0.17	0.09	0.33	0.56	1.00	
CS	0.45	0.55	0.16	0.07	0.07	0.17	0.26	0.06	0.39	0.58	0.51	1.00

6.6 Confirmatory Factor Analysis using AMOS

Figure 6.2: CFA Results



6.7 The Overall Fit:

The model fit indices like the comparative Fit Index (CFI), the goodness of fit index (GFI), Normed fit index (NFI), Tucker Lewis Index (TLI) and root mean square of error approximation (RMSEA) were selected to evaluate the model fit (Hair et al., 2010). In order to obtain an acceptable fit with data, the value of $\chi 2$/df should be less than 3 and the test must be desirably insignificant, though not necessarily given its limitations. In order for model to be a fit with reality, the CFI, GFI, NFI and TLI values should be more then 0.9 and the RMSEA value must be lower than 0.08 (Gefen and Straub, 2000). The Table 6.20, Table 6.21, Table 6.22, Table 6.23, and Table 6.24 present the goodness-of-fit diagnostic for the structural model.

Tables for Goodness of fit measures for structural model

Table 6.20: Value for CMIN/DF

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	98	2602	398	.000	2.53

Table 6.21: Value RMR, GFI

Model	RMR	GFI	AGFI	PGFI	PRATIO	PNFI	PCFI
Default model	.033	.796	.721	.623	.856	.684	.705

Table 6.22: Value for NFI & TLI

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.800	.789	.824	.894	.823

Table 6.23: Value for FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	4.02	3.42	3.16	3.66

Table 6.24: Values for RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.05	.08	.09	.00

Furthermore, as recommended, a multiple fit indexes set is presented below for easy reference (Table 6.25), which is used to check the measurement scale goodness-of-fit with data.

Table 6.25: Fit indices for measurement model

Index	Value	Recommended values for a good fit	Recommended values for very good fit	Sources
Chi square	1403.98	----	----	----
RMSEA	0.05	< .08	< .05	Byrne (1998)
NFI	0.82	> .8	> .9	Byrne (1998) and Zhang et al. (2002)
TLI	0.894	> .8	> .9	Byrne (1998) and Zhang et al. (2002)
GFI	0.79	> .8	> .9	Byrne (1998) and Zhang et al. (2002)
Chi square/ df	2.52 (p = 000)	> 1 and < 5	> 1 and < 3	Bollen (1989),Carmines and McIver, (1981), Hair et al. (1995)and Jöreskog (1969)

Table-6.25 shows the summary of goodness of-fit indices for measurement model. As indicated, the $\chi 2$/df is significant using the Type-I error rate of 0.05 indicating that there are statistically significant differences in observed and estimated covariance matrix within sampling fluctuations. However, based on these test statistics alone, the model cannot be rejected given the problems associated with it. As reported in the above Tables, all the selected indexes (RMSEA = 0.05; NFI = 0.82; TLI = 0.89; GFI = 0.79& Chi square/ df = 2.52) respect the goodness threshold for a very good fit, therefore the test can be considered successful and it is suitable to proceed to further examination of the model results. Therefore, issues regarding the study construct's validity will now be examined next.

6.8 Causal Relationship Effect Analysis:

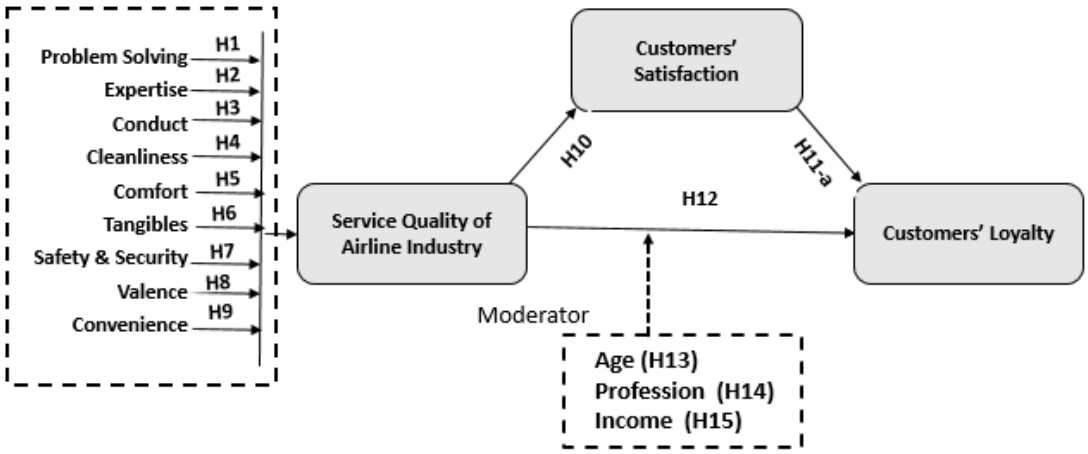


Figure 6.3: Conceptual Model with Hypothesis

The second order constructs SQMA is not having any independent items which falls in this constructs directly. So, SQMA is being measured by collectively all nine constructs namely; Tangibles (TAN), Safety & Security (SS), Cleanliness (CLE), Comfort (COM), Expertise (EXP), Conduct (CON), Problem Solving (PSO), Valence (INF), Convenience (CONV). To check the relationship effect of those constructs framing SQMA, we used the analysed data tabulated in Table 6.30 and Table 6.33. The contribution of 'Problem Solving' as a construct to frame second order construct 'Service Quality of Airline Industry' is found significant from Table 6.30, where path

coefficients is .37 between TAN → SQMA with Cohen's f^2 value is 7384.26 from Table 6.33, hence accepted H1. Regarding the hypothesis H2 (EXP → SQMA), the path coefficients value = .11 with Cohen's f^2 = 790.55, is sufficient to accept Hypothesis H2. For H3 (CON → SQMA), the value of coefficient is .27 with Cohen's f^2 value 5250.94 are supporting. For H4 (CLE → SQMA), the coefficient value is .17 with Cohen's f^2 value 1752.42 are good enough to accept H4. Regarding H5 hypothesis (COM → SQMA), the coefficient value is .08 with Cohen's f^2 value = 516.15, hence accepted H5 too. To establish the effect of TAN → SQMA (H6), the coefficient value is .37 with Cohen's f^2 value = 7384.26 is sufficient enough to accept this hypothesis. To accept hypothesis H7 (SS → SQMA), the coefficient value and Cohen's f^2 value were checked, which found .32 & 5027.45 respectively. Regarding H8 (INF → SQMA), the coefficient value is .02, with Cohen's f^2 value = 32.63, which is supporting H8 hypothesis as well. Regarding the last hypothesis H9 (CONV → SQMA), the coefficient value is found .15 with Cohen's f^2 value = 4845.27, which support hypothesis H9. By this way, we conclude that, all nine constructs are acting as a zero order constructs and framing one zero order constructs called service quality of airline industry (SQMA).

Table 6.26.1 presents the results of OLS regression estimating the impact of SQMA on CL. It can be observed from Table 6.26.1, Table 6.26.2 , and Table 6.26.3 that coefficient of SQMA → CL is significant (P = 0.00), with F value = 295.61, beta value = .561, t value = 17.19 with p-value less than .05. Thereby supporting Hypothesis H12 with R^2 = 31.4 in a relationship of SQMA & CL.

As regards with the causal relationship of SQMA → CS, it was examined by finding the imputed value of SQMA and CS and by employing OLS. The regression results of CL as a function of SQMA imputed from Table 6.27.1 to 6.27.3 showed that slope coefficient .58 is positive and significant with standard error 0.32, p value of .00, R^2= 0.34 and R = 0.58. This is sufficient enough to accept the hypothesis H-10 (SQMA → CS).

Regarding the causal relationship of CS → CL, the linear regression is employed again. According to the Table 6.28.1 to 6.28.3 , the R-square value of the causal

relationship is .26, i.e. CL as a function of CS is explaining 26 % of total variance, with F value – 227.20, beta value = .510, Std. Error = .03, p-value < .05. This information is sufficient enough to accept the hypothesis H11-a.

To measure hypothesis H11-b, which is framing the evidence that Customer Satisfaction is mediating the relationship of service quality of airline industry and customer loyalty, we check the indirect effect of SQMA → CL (Table 6.32) , which is .16, whereas total effect between SQMA → CL is found only .56 (Table 6.31) which is more than 3 times of indirect effect. From figure 5.4, it is clearly visible that the R^2 value is 31.8 percent when SQMA is having a direct effect on CL, whereas the R^2 value is increased (from Figure 5.5) from 31.8 % to 36.8 % when mediator Customer Satisfaction is introduced as a mediator between these two variable. Hence, hypothesis H11-b is also accepted (SQMA → CS → CL).

Table 6.26.1: Regression Model SQMA → CL

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.561[a]	.314	.313	.82907

a. Predictors: (Constant), SQMAA

Table 6.26.2: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	203.191	1	203.191	295.614	.000[a]
	Residual	443.341	645	.687		
	Total	646.532	646			

a. Predictors: (Constant), SQMAA

b. Dependent Variable: CLL

Table 6.26.3: Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.001	.033		-.034	.973
	SQMAA	.561	.033	.561	17.193	.000

a. Dependent Variable: CLL

Table 6.27.1: Regression Model SQMA → CS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.583[a]	.340	.339	.81366

a. Predictors: (Constant), SQMAA

Table 6.27.2: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	220.179	1	220.179	332.575	.000[a]
	Residual	427.018	645	.662		
	Total	647.196	646			

a. Predictors: (Constant), SQMAA

b. Dependent Variable: CSS

Table 6.27.3: Coefficients Result

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.001	.032		.047	.963
	SQMAA	.584	.032	.583	18.237	.000

a. Dependent Variable: CSS

Table 6.28.1: Regression Analysis CS → CL

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.510[a]	.260	.259	.86097

a. Predictors: (Constant), CSS

Table 6 .28.2: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.418	1	168.418	227.205	.000[a]
	Residual	478.114	645	.741		
	Total	646.532	646			
a. Predictors: (Constant), CSS						
b. Dependent Variable: CLL						

Table 6.28.3: Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.002	.034		-.055	.956
	CSS	.510	.034	.510	15.073	.000
a. Dependent Variable: CLL						

Table 6.29: Path Coefficient – Constructs

Construct	Coefficient of determination (R^2)	Adjusted R^2
SQMA	1.00	1.00
CL	0.37	0.36
CS	0.34	0.34

Table 6.30: Table Path Coefficients

Independent variable	Dependent variable		
	SQMA	CL	CS
TAN – Tangibles	0.37		
SS – Safety & Security	0.32		
CLE – Cleanliness	0.17		
COM – Comfort	0.08		
EXP – Expertise	0.11		
CON – Conduct	0.27		
PSO – Problem Solving	0.17		
INF – Valence	0.02		
CONV – Convenience	0.28		
SQMA		0.40	0.58
CS – Customer Satisfaction		0.28	

Table 6.31: Total Effects

Independent variable	Dependent variable		
	SQMA	CL	CS
TAN	0.37	0.21	0.22
SS	0.32	0.18	0.19
CLE	0.17	0.09	0.10
COM	0.08	0.05	0.05
EXP	0.11	0.06	0.06
CON	0.27	0.15	0.15
PSO	0.17	0.10	0.10
INF	0.02	0.01	0.01
CONV	0.28	0.15	0.16
SQMA		0.56	0.58
CS		0.28	

Table 6.32: Indirect Effects

Independent variable	Dependent variable		
	SQMA	CL	CS
TAN		0.21	0.22
SS		0.18	0.19
CLE		0.09	0.10
COM		0.05	0.05
EXP		0.06	0.06
CON		0.15	0.15
PSO		0.10	0.10
INF		0.01	0.01
CONV		0.15	0.16
SQMA		0.16	
CS			

Table 6.33: Effect Overview

Effect	Beta	Indirect effects	Total effect	Cohen's f^2
TAN -> SQMA	0.37		0.37	7384.26
TAN -> CL		0.21	0.21	
TAN -> CS		0.22	0.22	
SS -> SQMA	0.32		0.32	5027.45
SS -> CL		0.18	0.18	
SS -> CS		0.19	0.19	
CLE -> SQMA	0.17		0.17	1752.42
CLE -> CL		0.09	0.09	
CLE -> CS		0.10	0.10	
COM -> SQMA	0.08		0.08	516.15
COM -> CL		0.05	0.05	
COM -> CS		0.05	0.05	
EXP -> SQMA	0.11		0.11	790.55

EXP -> CL		0.06	0.06	
EXP -> CS		0.06	0.06	
CON -> SQMA	0.27		0.27	5250.94
CON -> CL		0.15	0.15	
CON -> CS		0.15	0.15	
PSO -> SQMA	0.17		0.17	2078.32
PSO -> CL		0.10	0.10	
PSO -> CS		0.10	0.10	
INF -> SQMA	0.02		0.02	32.63
INF -> CL		0.01	0.01	
INF -> CS		0.01	0.01	
CONV -> SQMA	0.28		0.28	4845.27
CONV -> CL		0.15	0.15	
CONV -> CS		0.16	0.16	
SQMA -> CL	0.40	0.16	0.56	0.17
SQMA -> CS	0.58		0.58	0.52
CS -> CL	0.28		0.28	0.08

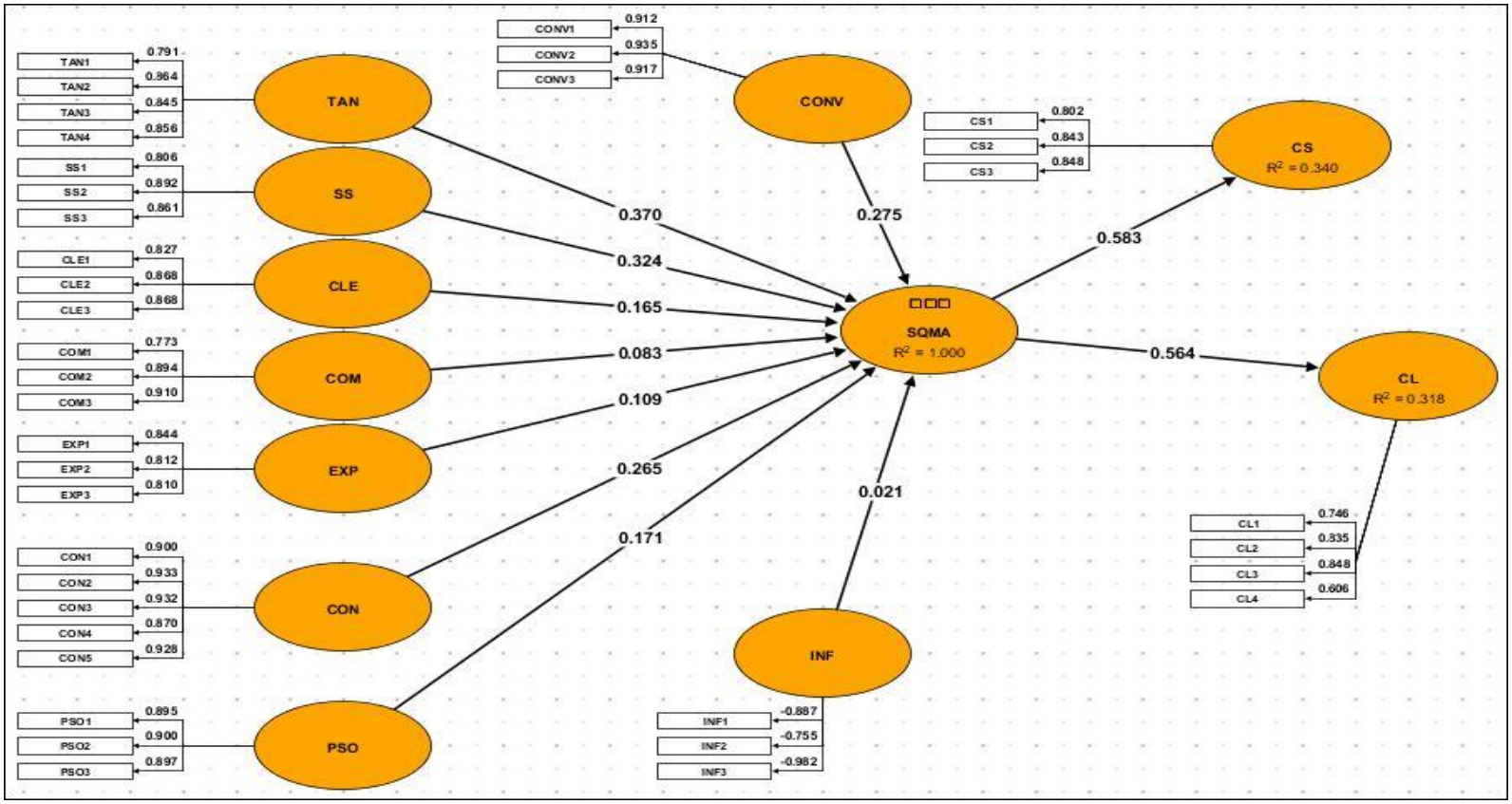


Figure 6.4: Regression Model to calculate R^2 (SQMA → CL, & SQMA → CS)

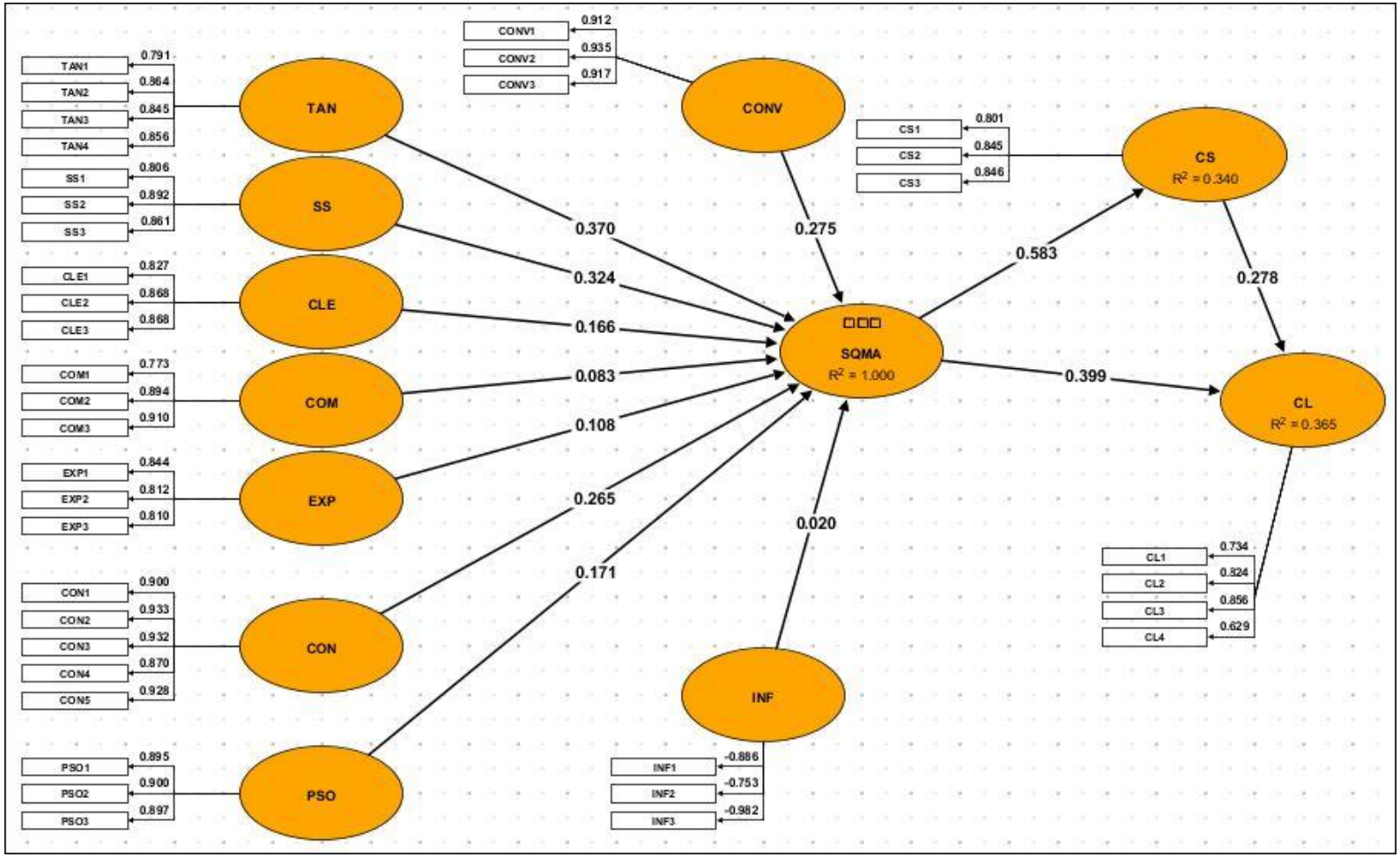


Figure 6.5: Regression Model to calculate R^2 (SQMA → CS → CL)

6.9 Analysis and comparison of the relationship between "service quality", "customer satisfaction" and "customer loyalty" among TATA SIA (Vistara) and Air India.

The data collected for both the companies Tata SIA (Vistara) and Air India, whereas 273 respondents were from Vistara Airline, and 374 responses received from Air India travellers. As per the structural analysis for both the respondents separately, it is clearly visible that airline travellers from Air India were loyal with the airline because the service quality of airline industry is better (beta value = .465 with R^2 = 26.7 %) but, causal relationship between the "customer satisfaction" and "customer loyalty" is not significant (beta value = .08 with p value > .05). This concludes that the role of customer satisfaction is low with Air India to increase customers' loyalty.

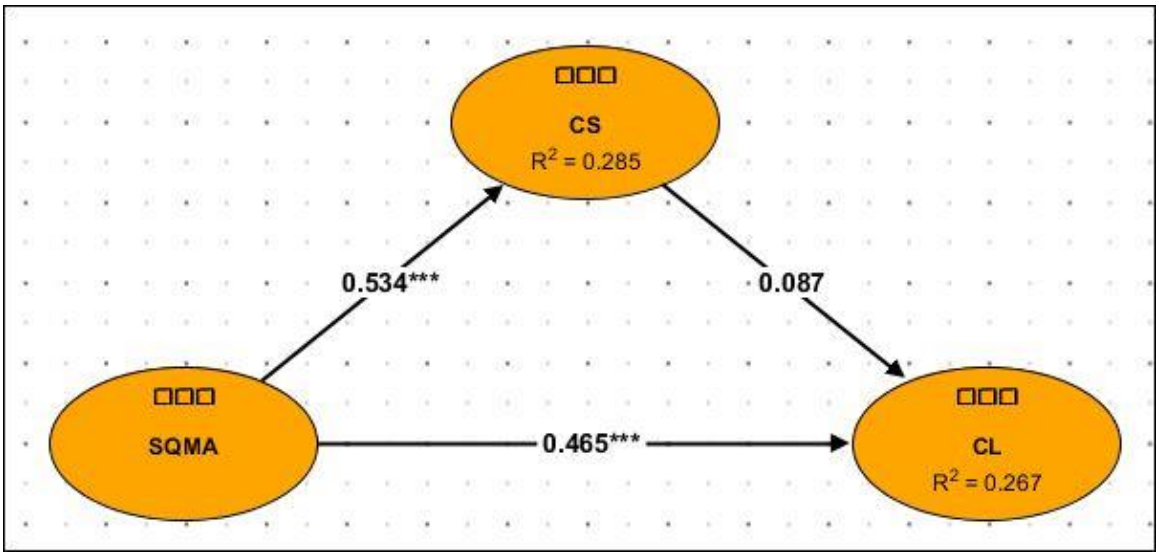


Figure 6.6: Air India travellers

On the other side, TATA SIA (Vistara) airline traveller are loyal with the airline industry due to the service quality of the airline industry (beta value = .16, with p –value < .05), and customer satisfaction as a mediator is also enhancing this causal relationship with beta value .44, & .21 with p-value < .05).

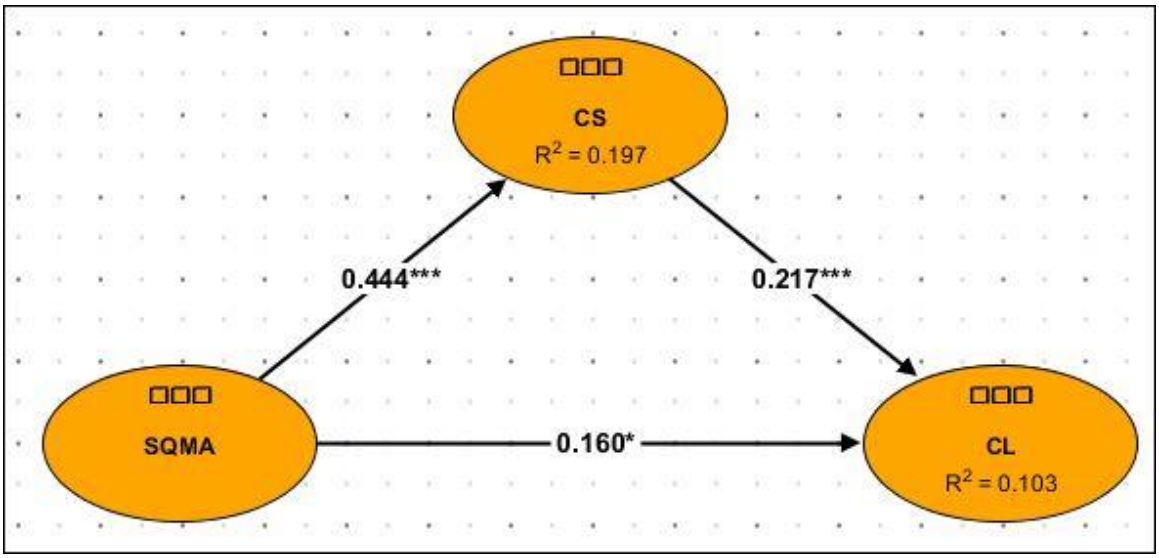


Figure 6.7: TATA SIA (Vistara) Airline travellers

Hence, it is proved that the relationship between service quality, customer satisfaction and customer loyalty among TATA SIA (Vistara) and Air India is significantly different. Especially the customer satisfaction is not playing a role as a mediator between service quality of Air India and customers' loyalty, and vice-versa is true in the case of TATA SIA (Vistara).

6.10 Moderation of Customers' Demographic on the conceptual model:

H13: Age of the customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H14: The Profession of customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

H15: The income of customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry**.**

6.10.1 (H13): Age of the customers' moderates the relationship of "Service quality" of Airline Industry and their "Loyalty" towards the airline industry.

An effort was made by the researcher to the relationship between various age groups and Loyalty towards the airline industry. Since, age was captured on nominal scale with five categories; analysis of variance was deemed the appropriate technique to test the hypothesis. The results obtained are presented in the following tables.

Table 6. 34 (H 13): Descriptive - ANOVA

Age	N	Mean	Std. Deviation
20 -30 Years	13	.4231	.68354
31 – 40 Years	322	-.3739	.88762
41- 50 Years	56	.5954	.97264
51 – 60 Years	229	.3313	.94545
Above 60 Years	27	.2470	1.22292
Total	647	.0015	1.00093

From the ANOVA table below, the test of significance is found to be significant ($F = 27.26$; $p = 0.00 < 0.05$). Therefore, the conclusion is that the alternate hypothesis is accepted with 1 percent level of significance, i.e. Age of the customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry**.**

Again going back to descriptive table, it happened that people with 31 – 40 years do possess more loyalty towards airline industry than any other generation groups. The ANOVA results obtained in this connection are presented in the below table.

Table 6.35 (H 13): ANOVA Result

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	93.964	4	23.491	27.260	.000
Within Groups	553.232	642	.862		
Total	647.196	646			

6.10.2 (H14): The Profession of customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

An effort was made by the researcher to the relationship between various Professions of customers' and Loyalty towards the airline industry. Since, age was captured on nominal scale with six categories; analysis of variance was deemed the appropriate technique to test the hypothesis. The results obtained are presented in the following tables.

Table 6. 36 (H 14): Descriptive – ANOVA

	N	Mean	Std. Deviation
Business Class	83	.1488	.91505
Job Oriented	194	.6634	.90000
Retired person	24	-.7804	.86606
Students	209	-.2176	.73420
House Wife	114	-.4993	1.03429
Others	23	-.8239	.85788
Total	647	.0015	1.00093

From the ANOVA table below, the test of significance is found to be significant (F = 40.63; p = 0.00 < 0.05). Therefore, the conclusion is that the alternate hypothesis is accepted with 1 percent level of significance, i.e. The Profession of customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

Again going back to descriptive table, it happened that he respondents who are students by profession possess more loyalty towards airline industry than any other generation groups. The ANOVA results obtained in this connection are presented in the below table.

Table 6.37 (H 14): ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	155.759	5	31.152	40.632	.000
Within Groups	491.437	641	.767		
Total	647.196	646			

6.10.3 (H15): The income of customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

An effort was made by the researcher to the relationship between the customers' income and Loyalty towards the airline industry. Since, age was captured on nominal scale with six categories; analysis of variance was deemed the appropriate technique to test the hypothesis. The results obtained are presented in the following tables.

Table 6.38 (H 15): Descriptive – ANOVA

Income/ Month	N	Mean	Std. Deviation
Rs. 30,000 or less	67	-.9846	1.07660
Between Rs. 30,001 – Rs. 40,000	102	-.2614	.84819
Between Rs. 40,001 – Rs. 50,000	66	.1458	.81056
Between Rs. 50,001 – Rs. 60,000	205	.6237	.94434
Above Rs. 60,000	207	-.2119	.73424
Total	647	.0015	1.00093

From the ANOVA table below, the test of significance is found to be significant ($F = 53.74$; $p = 0.00 < 0.05$). Therefore, the conclusion is that the alternate hypothesis is accepted with 1 percent level of significance, i.e. the income of customers' moderates the relationship of Service quality of Airline Industry and their Loyalty towards the airline industry.

Again going back to descriptive table, it happened that people with income more than Rs. 60,000 per month do possess more loyalty towards airline industry than any other income generation groups. The ANOVA results obtained in this connection are presented in the below table.

Table 6.39: ANOVA Results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	162.353	4	40.588	53.744	.000
Within Groups	484.844	642	.755		
Total	647.196	646			

6.11 Summary

The data analysis is explained in this chapter. The data cleaning is an important part of SEM analysis. The Cronbach's alpha vale for every construct i.e. tangibles, safety and security, cleanliness, comfort, expertise, problem solving, information, convenience, customer loyalty and customer satisfaction is verified and tables of these are displayed in this chapter. The tables for rotated component matrix and hypothesis related to demographic and dependent variables are explained. The values of validity issues content validity, nomological validity, convergent validity and CFA model using AMOS are also displayed in this chapter. The regression models, analysis of relationship between the two airlines TATA SIA (Vistara) and Air India and the mediation and moderation effects are also explained. In the end ANOVA results are also shown.

Chapter 7: Discussions and Conclusions

Outcomes from this research reveal a high reliability of a portion of AIRQUAL measurements, in particular airline physical assets, terminal tangibles and staff, just as consumer satisfaction. Effects of these measurements are well connected and can be utilized so as to quantify "service quality" perception of airline passengers. This finding is in consent with past research on this theme for two measurements 'image' and 'empathy', though, 'reliability' was observed as extremely low, and therefore these measurements can't be utilized as a measure for service quality. This is as opposed to outcomes in past research (for example Alotaibi, 2015). All things considered, research on AIRQUAL scale is still in their initial stage, thus there isn't sufficient proof for applicability of this scale as yet. That certainly is the cause behind why a correction of model is required.

Concerning the impact that "service quality" has on airline travellers "satisfaction", it tends to be presumed that a significant number of AIRQUAL measurements or things have a positive association with consumer satisfaction. Particularly work force is a significant maker of satisfaction, since they are significant contact point that traveller has with firm and is a vital part of service creation and delivery. Different measurements and things that impact consumer satisfaction are 'price', 'airline physical assets', 'brand image', 'cautious treatment of luggage' and 'punctuality'. Clients consider ticket cost while assessing service quality. If cost is excessively high in comparison with service they receive, they are somewhat unsatisfied on the grounds that they may have expected an even higher quality service for their money paid. Aircrafts state likewise assumes a significant place in assessing service quality as travellers get a significant part of these services on board. Also, it being a tangible part of service arrangement can consequently be assessed more effectively. Brand value of airline has direct effect on consumer expectations that they have from flight. An airline having an image known for the highest quality service arrangement is relied upon to convey the same level of "service quality" once more; in any case satisfaction of traveller will decline. Arriving on time to a

destination is a driver of satisfaction. Indeed, the importance of on time performance isn't restricted to aviation business only. This determinant of satisfaction is division particular, as clients of different types of transportation services expect to arrive punctually. Commonly, findings affirm that service quality is a precursor of consumer satisfaction in airline business which is in accordance to the outcome of past studies

Distinctions in business plans of LCCs as well as FSCs affect service quality perception of airline travellers. For nearly every AIRQUAL measurements or things, service quality recognitions were higher for FSCs in comparison to LCCs. Therefore Ismail and Jiang (2019), statement that FSCs emphasizes more on top notch service arrangement so as to distinguish from rivals is a successful methodology, as service quality perception of FSCs is enhanced. In comparison to LCCs, FSCs offer services for example; cooking or individual registration and their aircrafts are more spacious and comfortable than LCC's. FSCs attempt to make the trip an enjoyable and feasible for their clients, while LCCs concentrate on giving essential support for a minimum fare. Thus, the worth for cash view of clients is higher in LCCs than in FSCs. The main things that don't contrast among LCCs as well as FSCs are promptness and promotional offers. Almost every flight traveller, irrespective of airlines they travel, value timely departure and arrival. In addition, timeliness is frequently not assessed by airline, yet relies upon outer aspects, for example, climatic conditions, the travellers' dependability or the air traffic control guidelines. In this manner, being unpunctual can happen to both LCCs and FSCs and can't be forestalled by the carrier. Limited time offers are given by both kinds of aircrafts and are esteemed by travellers similarly. Taking into consideration all the facts, the study reviewed numerous critical contrasts in service quality recognitions among LCCs and FSCs. Summarizing investigation findings, it may be presumed that AIRQUAL scale (Mahmut Bakır et.al. 2020) is just partially reliable, "service quality" discernments have an effect on consumer satisfaction along with there are contrasts in service quality views among LCCs as well as FSCs. It observes that AIRQUAL scale however should be modified and advanced so as to be appropriate without reliability issues. Furthermore, research affirms positive association of service quality along with consumer loyalty that

has just been revealed by different analysts. Finally, this investigation highlights contrasts among LCCs as well as FSCs. In common, dissimilarities were found previously, however this examination denotes to distinctions concerning AIRQUAL measurements, which have not been researched previously.

Last chapter tries to present and outline major offerings of this research. In particular, the emphasis would be on elucidating how each question related to research is replied by this study. As primary target of current research is to approve airline service quality scale following actions projected by Parasuraman et al. (1988), an effort is made to clarify how these actions do well to meet research questions, planned in primary section. Further, favoured and opposed causal linkages, as projected in system of this investigation, will likewise be described. Besides, offerings of research to practice and to theory will likewise be explained. Finally, proposals for further research guidelines that are possibly advantageous as well as reasonable, just as, specific constraints of research will likewise be presented in subsequent areas.

7.1 Practical Implications

Findings from this investigation present certain realistic inferences for airline supervisors. Past study highlighted that satisfying clients can enhance profitability and organization growth (Ekiz, Hussain &Bavik, 2006; Oliver, 2010). Although, it is regularly hard for a firm to comprehend a client’s worth and which components of service provision assess satisfaction level of clients. Consequences of this investigation infer that work force as a significant determinant of consumer satisfaction. Findings for firms ought to emphasize more on requirements and information of their representatives. In order to accomplish this, inward promoting inside an aircraft ought to be improved. Inside promoting depicts utilization of outer promoting information on inner market Gummesson, E. (2007). Inside promotion is to persuade staff representatives as they are in direct interaction with clients and can augment service experience. This can be accomplished by improving workers' insights of organization's contributions, its business purpose, strategies and objectives (ibid.). Enhancing inner promotion on board an aircraft can prompt an upgraded service

arrangement, thus ensuring satisfied clients which helps to bring about an enhanced profitability and organisational growth.

Furthermore, worth received by clients in lieu of their payment is likewise a significant aspect of consumer satisfaction (Suhartanto & Noor, 2012). This was likewise affirmed by high offerings of ticket cost on consumer satisfaction that was revealed in regression investigation. Consequently, airline should charge as per services provided by them for tickets. By implementing this, it is significant not to overvalue services worth as well as keep cost minimum and viable. Primary perspective considered by client while booking flight is cost, without realizing the provision of services that are incorporated.

Thus additionally, it ought to be assured that the client is aware of the services are conveyed and will be provided and that how the chosen airline distinguishes from the others. The traveller will recognize, what they are paying for, and their aspirations would be fulfilled during flight. Similarly this can be applied for brand image. More definite it presents to contributions and systems of aircraft, better are accordance of client's desires and performance of airline. TATA SIA (Vistara) highlights on its on-board exquisite gourmet service and also highlights the facts of hiring celebrity chef for menu planning and brand names like Taj Sats to take care of this aspect of on board satisfaction. Air India harps on its expertise that it has arrangements even to carry your pets on the same flight the passenger is travelling.

Third aspect that requires attention is the physical appearance of the aircraft. From one perspective, this tangible part of service arrangement can be assessed more effectively by traveller than other intangible aspects, whereas, a high quality can likewise be guaranteed by the airline. An Aircraft’s surroundings of service arrangement form the initial impression of travellers’ service quality assessment. Interior support quality can be guaranteed by creating standard operating procedures (SOP’S) i.e. rules and guidelines for maintaining procedure, ensuring a steady quality standard.

7.2 Limitations of the study:

Commonly, no investigation is directed under ideal conditions, there are consistently restrictions that should be thought about. One element that restrains examination is sample. Questionnaire was spread out utilizing non probability testing and applying snowball impact. This guaranteed an enormous sample, yet representativeness of the population can be addressed. Sample for the most part comprises of females and most of the respondents are students. This doesn't reveal composition of populace, which incorporates for maximum employed individuals. Also, birthplace of respondents was wide-spread. This doesn't constrain examination, however concentrating on one nation or contrasting service quality impression of at least two nations could be an objective for future research. However present sample included numerous nations of starting point, it was unrealistic to analyse them in light of the fact that most of the respondents originated from India and the quantity of respondents from different nations was very low, so sample sizes vary strongly.

Additional restriction of this examination is that it emphasized uniquely around AIRQUAL scale as basis for service quality measurements. Also, two of these measurements didn't give a high reliability. In present study, things that lastly had a place with empathy and image measurement were evaluated on their own for this reason. Therefore for further research, AIRQUAL scale ought to be modified with respect to the things that highlight measurements and likewise considering different aspects that could impact service quality assessment, for example, security observations.

Moreover, satisfaction isn't exclusively assessed by degree of service quality, however relies likewise upon different variables. For example value, connection among client as well as firm or responsibility can have an impact too. R2 estimation of regression examination illustrates, that 59.7% of fluctuation in consumer loyalty is clarified by service quality measurements that are incorporated into model. Therefore, there are even different components that have an effect on consumer loyalty. In a future research, it can

be analysed for value, responsibility, connection among client and firm or different perspectives identify with consumer loyalty.

7.3 Research questions addressed

For the first part of current study presented, ten research questions were built up. There is one major query and rest rotates around that single inquiry. This inquiry is about investigation of "AIRQUAL" components along with resulting approval, which is followed by its effect on different projected factors.

7.4 Significance for theory and practice

Research objective is to build up insight regarding airline service quality (AIRQUAL) components along with its association to consumer satisfaction, rebuy goal, word of mouth, attitudinal dependability and complaining conduct Moreover, it additionally tries to research consumer satisfaction effect on repurchase aim, informal, attitudinal devotion, and complaining conduct. The discoveries from current research have suggestions for both theoretical as well as practical aspects.

7.4.1 Knowledge contribution

"Service quality" research inception has for sure called for further exploration. This is reason for long time analysts have been effectively inquiring about service quality and its effect on different factors in numerous ventures. SERVQUAL presented by Parasuraman et al. (1988), generated additional entryways for investigating as well as exploring service quality elements, while it had numerous restrictions. Accepting SERVQUAL concept, Bari et al. (2001) projected AIRQUAL, created for researching quality of services of aircrafts. Although, it had one significant restrictions and that was its absence of evaluation and validity. Current study, thus, took equivalent scale further by evaluating and approving it. It was completed via following a methodical technique, as introduced by Bari et al. (2001) and Parasuraman et al. (1988).

This is first and one of significant offerings of current research to group of information by setting up validity of service quality scale in airline business and afterward empirically verifying utilizing different suggested tests. Last approved scale, as created by this investigation, can be taken into account as last validated AIRQUAL scale, and might be accepted by different analysts.

Another significant part of understanding was verification of hypotheses. Outcomes highlighted some truly fascinating as well as significant discoveries. For example, relationship among service quality (approved one) along with other significant factors (consumer satisfaction, rebuy aims, informal correspondence and attitudinal reliability, complaining conduct) is significant indication. These linkages have contributed to current literature on "service quality", "consumer satisfaction", "client loyalty" and "complaining conduct".

This research has also offered methodological offerings that most important is improvement of strong instrument of research. Rigorous techniques for evaluation and approval were followed, bringing about an excellent scale. This was through setting up reliability of scale, just as, its matter, convergent and discriminant validity. This expansion to information, as a strong scale, will urge future analysts to receive and apply it in other countries.

7.4.2 Implications for professionals

Airlines around globe strive to discover strategies through which development of their quality of services provided can be done, since it directly results to increased "satisfaction" and "loyalty". Only proportions of service quality are basic for growth, as it instructs them to concentrate on those features that are crucial for progress. The equivalent is valid for aircraft industry as well. With development of rivalry in airline business, and initiation of budget aircrafts, full-service carriers like Air India and TATA SIA (Vistara), are striving to discover approaches to improve their service quality so as to

guarantee consumer loyalty and satisfaction, and repeat buys and diminished complaints from clients.

Current research work, thus, attempts to innovate with a scale that can be acknowledged by aviation companies not only in India but, also in different nations that share similar attributes, and guarantee their significant levels of “service quality”. This will expand “satisfaction level” of clients bringing about elevated levels of loyalty, which will also create positive verbal exchange... In the present scenario of intense rivalry, current investigation is viewed as significant for professionals.

7.4.3 Implication for policy-makers

For strategists, this research recommends that, components of service quality contrast in aviation business from those of different ventures, subsequently making it industry explicit and furthermore nation explicit. It is significant for enterprises to come up with their own “service quality” scales, or maybe approve and test current scales accessible for separate businesses. Current study, consequently, made an effort to do same and thus approved and tried service quality scale for airline business in India.

Strategy creators may take into account the current study to devise techniques for airlines in India. Various elements of service quality, which brought about various scores and quality, might be utilized to improve general nature of services offered by respective airlines. Moreover, various relationship reviewed in current research may likewise be remembered while making any approach associated with aviation. For example, this investigation found that service nature of airlines has positive effect on consumer satisfaction. Moreover, positive and critical effect of service quality on attitudinal loyalty, verbal exchange and rebuy aims are additionally significant and important discoveries for strategy producers. Considering these discoveries will unquestionably improve manner in which different marketing methodologies are planned. In conclusion, negative effect of service quality on complaining conduct is likewise crucial and evident. Due to this, if

strategists require decreasing complaints from clients, they ought to plan methodologies focussed mostly on significant levels of value services.

7.5 Directions for future research

Likewise with every research, current study additionally has a few restrictions, which may require additional research in similar area. Primarily, absence of generalizability of results to different enterprises is an issue. As sample is from India the business examined was airlines, subsequently, the outcomes of this study may not be of a significant value to different enterprises, as it's for airlines industry. Due to this reason, it is recommended that future research may go through a similar technique and come up with scales applicable for various enterprises.

Second, customer as respondent is other restriction hence, additional research should be possible to distinguish service quality from airlines personnel point of view, also a commendable effort is picking non-consumer (those individuals who have not yet travelled on board any air carrier) and inquire from them how they anticipate service quality. More critically, research would have more effect if random or quota sampling techniques were utilized to guarantee its generalizability and representativeness.

Thirdly, numerous significant factors from a similar model of research can be utilized as mediating or moderating factors. Current research discusses the mediating effect of “service quality” on “customer satisfaction” and moderating effects of age, profession and income which in extent of this research can be an important expansion. This can be further extended to, study effect of service quality on rebuy aim with mediating job of consumer loyalty. Essentially, the service quality impact on attitudinal loyalty and verbal exchange ought to likewise be tried with mediating role of consumer satisfaction. Thus, it is suggested that research for future may take in to its purview further extending and utilizing mediating factors.

Ultimately, research model can be supported via encompassing significant factors such as trust as well as perceived worth, as these are accounted for positively influencing

consumer loyalty and satisfaction. Further studies may take into account inducing these factors in model of current research. Current research marks an important turning point and is remarkable for airline business in India. Therefore it validates different prospects for future research.

7.6 Results

Consequences of current research bring up major issues about its value and connection between “service quality”, “satisfaction” and “loyalty” as a subject in its own privilege and about worth of broad literature which has been created around three ideas. Additionally, outcomes help to explain importance of “service quality”, “traveller satisfaction” and “loyalty” for marketing experts and validate recognition of certain restrictions upon its utilization. Significance of traveller satisfaction to marketers lies in its implication that service performance is worthy to traveller. Besides, it infers that traveller will tend to act in a positive manner towards an airline, for instance, prescribing airline to a companion, proceeding to fly with an airline later on and presenting challenge to alter preference regardless of attitude of close companions (loyalty).

Current study favoured supposition that high perception of “service quality” can bring about high level of “travellers’ satisfaction”. In addition, the reason that high perception of “service quality” will influence “traveller loyalty”, and that high level of loyalty might be affected by traveller fulfilment is additionally verified. Although, it is essential to consider here that in spite of fact that degree of a traveller’s satisfaction with air services passes on significant data about its performance (i.e. its high service quality), it can't just a standard which advertisers should use to evaluate a service.

Thus the significant levels of “traveller satisfaction” don't really imply that airline will be effective, and traveller will keep on flying with it. Traveller satisfaction or loyalty only can't thus be utilized as reason for total advertising choices. Distinctive aircraft services will have shifted effect upon entire degree of traveller satisfaction. This implies it is significant that airlines looks at manner via which traveller satisfaction arise and

recognizes general commitment of satisfaction with different services to sub measurements of and additionally total service satisfaction. Significance may change between various sorts of travellers. This obviously likewise has suggestions for assessment of traveller satisfaction.

Traveller's satisfaction contains generally minimal analytical data for advertiser. However it may be utilized to distinguish service performance zones which are insufficient, it doesn't give any direction on how performance ought to be changed to enhance fulfilment ratings. Hence, loyalty idea was considered inside in this research, it offers increasingly extensive data about airline performance. Finally, as per hypothetical and theoretical offerings, airline can profit by utilizing technique engaged with creating such critical outcomes. For instance, airline can utilize instrument in different ways: such as an airlines could do a market investigation of a particular route with waning income. By implementing present survey evaluation they can distinguish what clients on this route need from an airline and how they assess services given by the airlines company. This will specifically point out to an airline as to where concern is to be focussed.

The review evaluation "(questionnaire)" can be utilized as an in-flight study tool. Airline can utilize data assembled to consistently evaluate travellers' needs. Assembled data can be statistically compared on a monthly or quarterly basis. Besides, instrument can be altered to accommodate to the shifting trends and goals that an airlines can inspect a specific element of client service.

Airlines can utilize survey during complicated flight tasks, amounting to delays due to prevalent weather conditions or technical and mechanical issues. Travellers in general tend to be more loyal in their assessments when they feel that they have been troubled. Subsequently, airlines can utilize and benefit from the study in different ways. Firstly, they can offer it to travelers with the goal that they can communicate their disappointment. When travellers are permitted to communicate their assessments and they realize that data will be sent directly to upper administration, they are bound to be vigilant about the circumstances.

Airlines can also utilize data accumulated to evaluate how travellers see their performance in an emergency situation. Likewise airline can utilize data assembled to perceive how airline really performed and contrast this with performance criteria of how it might want to execute while an emergency situation arose.

7.6.1 Key Results:

- The satisfaction is significant to aviation companies as it will culminate to the loyalty of passengers, as it will result into passengers reusing the aviation services again.
- A high level of "service quality" can bring about a high level of "satisfaction".
- The satisfaction level may be different for varying travellers depending upon the class they opt to fly, their age factor, and their occupation.
- Airline can benefit by the utilization of instrument for investigation of particular requirements of passengers on different routes that vary due to the fact that India being a multi-cultural society. The requirements, the food habits of foreign clients vary for passengers travelling to tourist destinations like Goa or Ladakh. Stamolampros et.al, (2018). Elucidated the significance of understanding the demographic and cultural characteristics of their customers.
- Airlines can get feedback from passengers and can improve their services accordingly by even by controlling the cost factors. Matiullah Saadat et.al (2018) elaborated how service strategy influences customer satisfaction in Air Asia Malaysia.

7.7 Recommendations:

Schindler (1993) directed that if an enterprises need to recognize what their "user-client" needs, they ought to accept old methodology of asking them. Current investigation used

this method and has delivered a tool with sensible high reliability and validity that has created fascinating outcomes.

7.7.1 General recommendations:

1) Total quality management (TQM) perception: An airline's ultimate goal aims at providing an intricate travel idea, subtle to a traveller's requirement at a considerably substantial price. The onus of purchasing an idea and assessing the relational quality between various services provided rests with the customer. It is not fair to separate core, backing and assisting administrations into smaller factors and assess "quality" of single parts. For instance, it doesn't help much that "check in" as well as "reservation" administrations were ideal and the meal provided was stupendous but if a delay caused the client a few hours hold up at air terminal itself. Thus the quality can't be assessed vertically, but horizontally for the entire services provided.

   Significantly it's not average quality from a check list, but the absolute nature of service package offered to the client in his own subjective manner. TQM identifies with the accompanying issue like Passenger loyalty i.e. most secure or pertinent approach to quantify this all out quality is perception of client's dedication toward airline. Repeat business and great informal advertising will be a key achievement pointer. Share of overall industry will likewise be significant by considering various market sections and how frequently they repeat their business with airline. Employee investment is critical to create or enlist staffs that are increasingly able to settle on singular choices relying upon current circumstances and conditions prevailing at air terminals. This requires an exceptionally dedicated, committed, energetic staff a zeal for their duty where individual idea, team idea and administration idea are on the same wavelength.

2. Structuring of a competitive package agenda: A competitive agenda comprises a mix of a various growth strategies like Michel Porters model that involves cost leadership which provides high level of customer satisfaction through service quality

at minimal costs. There can be an ideal mix of this with focus strategy targeting the potential buyers. These should be offered through a progressed coordinated overall data framework and various strategic alliances. Although, a key to accomplishment of this is a program of an exclusive services offered through high dedicated professional staff. For airlines, acquiring a patent on its framework of services provided to travellers is cumbersome, yet airline that executes a phenomenal assistance that is difficult to imitate.

3. Quality advancement: Quality advancement implies improving entire service chain parts and seeing it in totality. Thus, below mentioned points are significant for quality advancement:

   - Refining individual quality skills of airline personnel.
   - Being analytical to the cause of complaints and making it simpler for client to complain."
   - Revising the flaws which have emerged and need improvement.
   - Providing liberal pay.
   - Providing honest data for analysis.

4. Evolving of an own airline culture and philosophy (or image): This involves a viable and practical mix of a proactive data handling and a propelled administration culture, concentrated on organisational service learning enabling customers to be loyal and benefit from it. This administration culture must be a part of frequently learning association where individual, team and organisational idea coordinate one another. In time, research and training will turn into an essential factor for organisational learning, where the psychological reproduction of basic components in the administration frameworks will be of major significance.

5. Research and Development: As proposed by Zahoric and Rust (1992), there is obviously a requirement for quantitatively determined experimental research in specific area and implementable suggestions for managers, for example, airlines

organisations measure both consumer satisfaction and client loyalty, specific measures can be suggested that will streamline supervisors' interests in enhanced service connections between consumer loyalty, client satisfaction and service quality affirm future research.

7.7.2 Recommendations to the Air India and TATA SIA (Vistara)

To be effective Air India and TATA SIA (Vistara) should concentrate on the following issues:

1) The airline companies can classify the passengers into groups in accordance of their psychographic traits.

- Group one concentrating on economy conscious travellers promoting a message focussing on how much an airline's costs is competitive when contrasted with different airlines.

- Group two concentrating on punctuality conscious passengers airlines should focus on its significance of advantageous flight timetables, connecting flights and its connections to the remotest parts of the country like north eastern states for accessibility.

- Group three, "indifferent Passengers", it is best not to waste long time on this group since travellers have negative perspectives and don’t care about costs, flight calendars and data, or even promotional impacts. Thus, airline should attempt to examine what are different elements that can influence this present portion's choice decision.”

2) Quality improvement in first and business classes for Air India and in business class and premium economy class in TATA SIA (Vistara) has more scope and innovative ways can be devised in these two revenue generating sections of the aircraft.

3) Analysis of the segments with a need for improvement as viewed by various classifications of travellers. This will further help airlines to resolve issues and to give particular sorts of administrations that were not secured previously. In addition, it will generate travellers' satisfaction and willingness to re - fly with airline.

4) Achieve a high level of compassion to individual passenger's requirements. A traveller purchases a travel idea according to his requirements, suitability and not various quantifiable services. This is singular service coordinated with mass services. Verifiable data relating to travel habits for client is of essential analytical value for assessing both service quality and benefit of each assistance in framework, just as for offering new service openings.

5) Achieving a high level of passenger satisfaction with a comprehensive service package, integrating comparative assessments of definite ideas of services from each month, a capacity for immediate trouble resolving and removing the components that have been rendered irrelevant.

6) Airlines ought to concentrate their efforts on specific areas of quality that have a protruding impact on revealing buyer's intentions and their fulfilment. A good return is possible with limited assets accessible to service quality enhancements, certifying that guaranteed administration is performed precisely, reliably, and with extraordinary requirements of people need will certainly inculcate intentions for re – buying.

7) Airline administrators ought to be careful so as not to build traveller desires for any of administration quality measurements while advancing their administrations while strengthening their workers' education and training projects to improve traveller observations.

8) Air India can build a loyalty base it being a national airline can ensure increasingly regular customers. TATA SIA (Vistara) can rely on its brand name it

being the progenitor of airlines in India. Promoting messages through conveying hand-outs, schedules, gifts, souvenir's with airline logo.

9) Air lines should give more discounts and incentives to students, senior citizens they being sensitive to ticket cost while choosing an airline to fly with.

7.8 Summary

Current investigation results may probably have a wide-ranging bearing as to how airlines view customer service in the imminent future. An analysis of the outcomes i.e. the hypothetical effect of the study, endorses that airlines may need to reinvestigate a client's requirements in terms of services. It significantly throws lights on the associated causes and reasons of airline operations administration, traveller fulfilment and dependability. A host of other research areas of interest have also surfaced.

1) Further research should involve a replication of the current investigation. This could be beneficial in improving the value and general suitability of findings in the current study, especially in reference to the airlines administration quality.

2) Further study should take into effect the satisfaction estimate taking the item fulfilment also into its purview which has not been estimated to lessen length of survey. Thus, throwing light on the connection among nature of each service item and traveller satisfaction with that airline.

3) Future study should examine the causes as to travellers travelling for various reasons may have different degrees of satisfaction with the services offered by an airline.

4) Further examination of loyalty estimation issue. This investigation has advanced reason for comprehensive loyalty estimation via a battery of estimations that incorporate both attitudinal as well as social parts of loyalty. In any case, in present study, 13-things were utilized to measure seven components (factors) to

decrease questionnaire length. This was most likely explanation behind low reliability quality estimations of subsequent loyalty factors. Thusly, it is prescribed that quantity of inquiries (things) that discuss every loyalty factor ought to be expanded so as to make loyalty scale more comprehensive and pertinent.

5) An analysis of aircraft workers' view of administration quality, contrasting them with travellers' view. This will assist with recognizing gaps or contrasts among beneficiaries and providers (i.e. travellers and airline representatives) in assessing aircraft services.

6) Utilization of study to more than two airline providing different types of services will most likely offer increasingly wide-ranging outcomes and subsequently lead to a more thorough analysis.

7) The utilization of a field setting (i. e. field study) in current research permits more prominent extension for contortion of outcomes because of presence of unessential factors which confound information.

8) Passengers who co-operated in this study might not have had certain awareness of the certain service privileges provided by Air India and TATA SIA (Vistara) and that might be unaware of a decent comprehension of portion of\ inquiries. Consequently they may have been not able to assess nature of these services particularly if flying for first time. Passengers might not have given adequate inquiries idea. Subsequently, they may have reacted improperly and this could influence result of examination. Surveys wordings may have inspired wrong reactions, however analyst attempt to make it as simple and justifiable as possible.

9) Passengers' emotions and attitudes towards a particular airline might be reflected in significance they place on explicit things. For instance, if a traveller felt abused at air terminal (e.g., strong handed security methodology, bad luggage taking care of) they might be increasingly able to push significance of that specific factor

while assessing different administrations (e. g., cabin staff administrations, food quality, and so forth.)

10) Questionnaire length may have affected travellers' reactions particularly on last areas of survey; for example they may have addressed these inquiries rapidly along without adequate idea of the things.

11) Researched sample might not have highlighted similarly all nationalities of travellers and India being multi – lingual also had an effect on this study as it might have been interpreted differently by various travellers.

12) Due to reasons identified with diminishing length of questionnaire, a few inquiries were erased, particularly those used to quantify item fulfilment and loyalty factors. This may influence reliability and validity of estimation of three major constructs discussed in this study.

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