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Analyzing Pakistani Airlines' Service Improvement Strategy through Importance and Performance Analysis

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Abstract

This study aims to conduct importance and performance analysis of Pakistani airlines for service improvement strategy. The data is collected via self-administered questionnaires which were used to collect information from 200 respondents who had travelled on a domestic flight. Their responses were recorded on a 5-point Likert Scale by taking eight constructs, four for their perceived importance and four for the actual experiences. Two tests were used for this analysis which were one sample t test and paired sample t test. The findings show that all four service dimensions were statistically significant and the respondents' perceptions do not match with their actual experiences while travelling on domestic flights.

Keywords: passenger expectations, passenger satisfaction, service quality

JEL Classification: Z0

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1. Introduction

The domestic aviation sector of Pakistan is one of the crucial components of the economy which has played a fundamental role in strengthening the transport and communications sector (Saleem et al., 2017). After deregulation of civil aviation in Pakistan, both the size of the fleet and traffic volume of the domestic air travel market have grown steadily and the number of destinations has increased resulting in the opening up of even the remotest regions of the country to the benefits of development. Deregulation not only allowed individual airlines the freedom to charge low fares but also allowed them to offer lower levels of service to their passengers.

However, despite the initial rise in annual passenger volumes, the financial condition of the new entrants soon began to decline and they suffered huge losses and some of the new airlines were eventually forced into bankruptcy. In a competitive environment, the provision of high quality services is necessary and customers must become the focus of all the airlines' operating and customer strategies.

Airlines must strive to constantly innovate and implement service improvement strategies to attract and retain passengers and build loyalty to their brands, including fare promotion strategy, frequent flyer programs, smart and friendly cabin crew, latest aircraft equipped with in-flight entertainment systems, in-flight mobile phone service, internet and mobile-based reservation systems to make each flight a specially memorable experience for the passengers.

In order to assess the effectiveness of the selected customer service strategy the airline managements need an effective monitoring tool. Airline services are different compared to a tangible product like an automobile, e.g. they are transparent or produced and consumed simultaneously and also heterogeneous, consisting of dissimilar or diverse ingredients or constituents, and also they are characterized by fugitiveness or being of short duration and transient in nature.

This paper proposes a systematic model to help the airline industry to measure and improve the level of service quality which in turn will enable the industry to return to profitability and contribute its share to national development. Airline managers are faced with the question of how best to learn about their passengers' expectations and then try to develop a customer service strategy that meets those service expectations. So it is essential to develop a reliable tool or set of tools to help airline managers evaluate the relative success of their service offerings and also to guide them in developing more effective customer service strategies.

From an airlines perspective the fundamental question which needs to be understood is what are the most significant variables of airline passenger service? How much importance do the passengers give to these variables? Are the passengers satisfied with the quality of airline services?

In order to achieve the objective of developing a robust method of recording and understanding passenger aspirations on a continuing basis so that airlines can tailor their service offerings accordingly and concentrate their limited resources in those service areas which have been identified as having the highest impact for a majority of their passengers, the approach used is to select important service areas such as 'seat reservation, cabin service, cabin crew and timeliness of flights', and ask the passengers to rank these attributes with respect to the 'degree of importance and the perceived level of performance'.

2. Literature Review

The results of previous research studies on airline passenger service quality were explored. The exercise yielded studies which explored various aspects and employed statistical techniques and different research methodologies with the aim of enhancing the understanding of service quality.

Archana and Subha (2012) used a sample of 270 respondents in India and tested the significance of service quality influences on passenger satisfaction using the variables of 'in-flight service, in-flight digital service and back-office operations'. Feng and Jeng (2005) used a sample of 599 respondents (domestic airline passengers) in Taiwan and tested the significance of the 'degree of care, degree of satisfaction and priority' on nine service variables including 'seat reservation, ground service, cabin serve, food, baggage, etc.' using the Importance-Performance Analysis methodology.

De Jager et al. (2012) employed two samples of 196 participants (domestic passengers) from South Africa and 189 from Malaysia to examine the relationship between service quality and customer expectations using survey methodology to collect and summarize the mean ratings of service dimensions and non-probabilistic sampling. Variables tested consisted of 'convenience of booking, cabin service, cabin crew, and timeliness of flight'. Atalik (2007) used a sample of 608 respondents (Turkish Airlines passengers) via the internet to identify the most common customer complaints and included the variables of cabin crew and behavior of personnel. Variables included 'quality of service, disruptions to flights (timeliness of flights), baggage, safety, and reservations (booking)'. Qualitative methodology was used to analyze the results.

Saha and Theingi (2009) employed a quota sample of 1212 respondents (domestic airline passengers) in Thailand to identify the relationship between 'service quality, satisfaction and behavioural intentions' variables. The methodology used was Structural Equation Modelling as well as the exploratory factor analysis. 21 items were selected for the four constructs of tangibles (aircraft, seating, air conditioning), flight schedule (timeliness of flights), flight attendants (cabin crew) and ground staff.

Aksoy et al. (2003) employed a sample of 1014 respondents (Turkish domestic airline passengers and four European airlines) to study the demographic profiles, attitudes and behavior, and airline service expectation and satisfaction. Methodology included survey, classification and using averages to identify service dimensions to predict satisfaction levels using chi-square test. Park (2007) used samples of 592 and 501 respondents

respectively from airline passengers in Australia and Korea to study the 'perceptions of airline service quality (using class of service and frequency of travel)' in each market. Methodology used was ANOVA coupled with independent sample *t*-test and variables included 'behavior intentions, in-flight service (cabin service), reservation related services (booking), airport service (baggage and check-in), employee service (cabin crew), satisfaction, and service quality'. Park et al. (2005) used a sample of 501 passengers in Australia to investigate 'individual dimensions of airline service quality, airline image, and passengers' future behavioral intentions using Structural Equation Modeling using a maximum likelihood estimator'.

Gilbert and Wong (2003) used a sample of 336 respondents (departing airline passengers) in Hong Kong to study passenger expectations and airline services. Methodology consisted of SERVQUAL wherein a total of 26 service items were evaluated and ranked in order of importance. Dimensions included assurance, reliability, responsiveness, flight patterns, employees, facilities.

De Jager et al. (2012) made a comparative study of domestic airline passengers in South Africa and Italy to see the relative significance of various dimensions of airline service in the two countries. The South African sample size was 335 whereas the Italian sample consisted of 101 passengers. The variables included timeliness of flights, in-flight cabin services, cabin crew and cabin cleanliness. They found that the results of the survey confirmed the similarity of results between the two markets with a slight variation of emphasis in two variables between the Italian and South African samples.

More recently, service and value factors given the highest importance by domestic airline passengers were studied in Pakistan (Qasim, 2015) using a sample of 100 respondents (domestic airline passengers) in Pakistan. The methodology consisted of passenger survey and ranking of mean satisfaction scores on five variables and the results were compared with similar studies carried out earlier in Malaysia and South Africa.

Building upon the earlier research study done by the author (Qasim, 2015) where the subject of passenger satisfaction was first studied in Pakistan, the present research study has further refined and developed a more rigorous methodology for analyzing not only the importance of the individual service variables but also the degree of satisfaction experienced by different categories of passengers travelling on the domestic airlines in Pakistan.

The five structures of the original service quality model (SERVQUAL) of Parasuraman et al. (1985) consisted of "tangibility, concern (empathy), reliability, response and assurance". However it is important to note that although this model has been widely used by researchers in evaluating the service quality in various industries it does not cover all aspects of the highly complex airline passenger service quality.

Airline service is much more complex and comprises of a large number of tangible and intangible attributes. Such unique service factors as on time performance, in-flight service, baggage delivery, in-flight entertainment, in-flight duty free sales, etc., are

specific to the airline industry (Kumthonkittikul, 2020). Airline passengers experience a variety of intangible services.

Any system which purports to measure the quality of airline passenger services must be reliable to distinguish between the passengers. This gap has not been sufficiently addressed in previous studies and more specifically in the Pakistani context (see, Petitt, 2019; Hubbard, 2020; Rugemalila, 2020).

The present study is based on a survey methodology that focuses on the expectations and perceived value factors of domestic passengers when they fly on different domestic airlines. The importance performance analysis (IPA) methodology has been modified to make it a more rigorous and robust tool by incorporating the popular paired sample *t* test statistic.

3. Theoretical Framework

Parasuraman et al. (1985) believed that all airlines need a reliable tool to develop a better understanding of the dimensions of service quality as they form the core competitive advantage and, in turn, influence passenger retention, market share and profitability.

Service quality can be defined as 'consumer's overall impression of the relative efficiency of the organization and its services' (Archana & Subha, 2012). Understanding exactly what the passengers expect is a critical step in defining and delivering the appropriate level of service. It thus follows that service quality is one of the best models for evaluating customers' expectations and perceptions.

The performance of a company leads to customer satisfaction (or lack of satisfaction) with a product or service. Expectations are the 'pre-consumption beliefs that consumers draw upon as the probabilities of the occurrence of positive and negative events' and form an important part of the decision process for an airline.

Literature proposed three important dimensions influence the passengers' selection of an airline. In fact these dimensions form the building blocks for any meaningful study of the airline services and as discussed further in the literature survey section, several iterations of these aforementioned characteristics have been developed by various scholars over the last few years.

'Service quality is a cognitive assessment of services in each occurrence, whereas satisfaction is the accumulated effect on the customers' evaluation of the services' (Oliver, 1997; Cronin and Taylor, 1992; Parasuraman et al., 1985). There is a mutually corresponding relationship between the two dimensions of customer service namely customer satisfaction and perceived service quality. Parasuraman et al. (1985) defined service quality as "a function of the difference between service expected and the customers' perceptions of the actual service delivered".

According to Bitner & Hubbert (1994), "Service quality is a consumers' overall impression of the relative inferiority/superiority of the organization and its services".

As competition grew over time, service quality of the service provided to passengers in the airline industry assumed paramount importance. Passenger satisfaction has to be achieved despite hurdles of cost, technology, requirements of safety and other factors so that the perceived benefits exceed their expectation. This value added aspect of passenger service is of critical importance in formulating a superior customer service strategy which will effectively create product differentiation and sustain it in the long run.

One of the primary goals of any airline's customer service strategy would be 'passenger satisfaction' which practically translates into a special and memorable travel experience each time the passenger chooses to travel on the selected airline (Tzvetkova,2020).

If an airline can correctly perceive the passenger expectations towards different aspects of its service and modify its offerings accordingly, it builds trust and stands a much better chance of achieving a higher level of passenger satisfaction.

4. Methodology

As most of the studies have highlighted various aspects of passenger services but failed to present a comprehensive tool which the airline managements can easily utilize to strengthen their competitive advantage, it was felt that a robust methodology needs to be developed which addresses the weaknesses of previous studies and develops a comprehensive solution which may assist airline managements to practically implement and monitor a service improvement strategy.

Based on the survey of the literature on airline service quality which has been discussed earlier, the above methodology was further improved by adding the *t*-test for the individual constructs of 'convenience of booking, cabin service, cabin crew and timeliness of flight'. The analysis was further strengthened by using the paired sample *t*-test for testing the mean values of the differences between perceived and experienced values. Both these aspects, when taken together, yield a much more robust result as compared to a simple ranking of mean values as done in the earlier studies.

4.1 Variables

The questions are designed to gather the required information in a structured format so that necessary statistical analysis could be done and meaningful results achieved. The results of these studies would then form the basis for implementing the required service improvements. Based on the results of the literature survey the service variables chosen for this research include the most important dimensions of 'convenience of booking, cabin service, cabin crew and timeliness of flight'. These four 'dimensions' of service cover almost the entire spectrum of airline passenger services and also serve as a reliable measure for recording and comparing their intangible aspects.

The first dimension, convenience of booking, includes the items of 'convenience in making reservation, allowable weight, and online booking opportunity, availability of website and maximum information on airline's website.

The selected items reflect the importance of studying the impact of individual service items on the formation of an opinion about the total travel experience. In fact it is

important to highlight the fact that in addition to the in-flight service variables which have been discussed here, the passengers' perceptions are also influenced by the quality of the services which they have experienced prior to the commencement of the airborne portion of the journey.

Thus the passenger can only be expected to have a positive perception of the airborne portion of the journey if he/she has already experienced a pleasant and high level of personalized service on the ground while traveling to the airport, finding car parking space, availability of baggage trolleys, waiting for the flight departure, availability of conveniences like pharmacy or internet facility, etc., and helpful ground staff to answer questions or assist with extra baggage or small children, ability to make phone calls and finally boarding the aircraft. Thus the airline managers must recognize the importance of pre-flight ground services being provided to the passengers while planning a comprehensive passenger services strategy (Qasim, 2017).

The second dimension 'Cabin service' variable includes the following ten items, 'variety of food served during flight, quality of the food served, amount of the food served during flight, comfort of the seats, cabin cleanliness, cabin ventilation, availability of newspapers and magazines in multiple languages, carry-on (overhead) storage space, timeliness of food and drink service, and continuous innovation and improvements in service'. These variables all have a direct impact on all passengers and generally influence their perceptions about the airline. The third dimension 'Cabin Crew' chosen for this study included the following three items, 'cabin crews' credibility, cabin crews' ability to answer questions, and physical appearance of the cabin crew (tidiness, etc.)'. The passengers frequently recall instances of poor service on board the aircraft, e.g. if a passenger is ignored by a crew member after asking for a drink, he may be annoyed but may not always complain to the airlines' front line service personnel (Chi et al., 2020).

On the other hand he may simply choose to fly on a competitor's flight the next time he travels.

The fourth dimension 'Timeliness of flight' involves the following four service items of 'speed of check-in, on-time luggage delivery on arrival, on-time departures and arrivals, and direct service to destination'. These variables are also important components of the overall passenger services and may be crucial in influencing the passengers' repeat purchase decision.

4.2 Sample and Sampling Technique

The information was gathered first hand through a self-administered questionnaire from passengers arriving at the Karachi Airport on domestic flights. The questions are designed to cover two aspects of each of the service variables being examined, namely the 'degree of importance' accorded to each of the service items from the passengers' point of view and, secondly, the 'degree of satisfaction' actually experienced (performance) by the passengers. The sample size of this study is based on the total population of passengers travelling on the primary domestic routes within Pakistan which is approximately 200,000 passengers per month based on the last five years statistics

published by the Pakistan Civil Aviation Authority on their official website (www.civilaviation.gov.pk). The sample size has been selected based on the formula (Feng & Jeng, 2005).

$$n = N/N\,[2d/Z\propto_{/2}]^2+1$$

Where n= Sample size and N= Population size and d=Error

The instrument is a questionnaire, earlier versions of which have already been used in airline studies in South Africa and Malaysia. The instrument has been subjected to pilot testing. It was tested on over 200 passengers of domestic airlines in South Africa as well as a similar number of passengers in Kuala Lumpur, Malaysia. The Cronbach Alpha gave a score above 0.88 for the Likert scale (De Jager et al., 2012). For this study the service variables related to the aspects of 'convenience of booking, cabin service, cabin crew and flight timeliness' were included.

The information collected was statistically analyzed using the independent sample *t*-test as well as the paired sample *t*-test. IPA is a method of ranking the means of the variables on grid. It consists of 'a two dimensional framework to describe the relationship between the degree of satisfaction and the degree of care'. As stated earlier, one of the important service issues in passenger services (which all airlines face) is to identify aspects of relatively higher importance from the passengers' point of view. This would enable the airline managements to learn about the passenger preferences as well as their perceived levels of satisfaction with the current offerings. The airline managers can then use this information to make specific changes and improve their service offerings and align their service mix to make it progressively customer-centric. For this approach to be practical it is essential to develop a relatively simple and economical method of data collection at frequent intervals.

4.3 Inclusion Criteria

Although some authors have criticized the choice of interviewing arriving passengers instead of departing passengers for fear of introducing bias, in this study arriving passengers have been selected for collection of information as this group of passengers would provide more reliable information about their true feelings and experiences immediately after completing their journey.

Secondly, the number of first time air travelers constitutes a larger proportion of the Pakistan domestic travel sample as compared to more mature markets where the number of more frequent travelers is relatively higher.

Another aspect of interviewing departing passengers is that some of the passengers may not recall their earlier flight experiences and thus their views may be less reliable (Batra, 2020). The data collected were statistically analyzed using SPSS and the mean importance ratings and the mean performance ratings for each service variable were analyzed using the independent sample *t*-test.

Next the paired sample *t*-test was used to analyse the significance of the differences between the means. The results of both tests are discussed further in the results section of this study.

4.4 Statistical technique

The individual significance of the four constructs as described above was analyzed through one sample *t*-test followed by paired sample *t*-test to gauge the significance of actual experience versus customers' perceived service quality. One sample *t* test has taken 3 as the test value on the 5-point Likert scale and compared the means of each construct with its computed value. Paired sample *t* test has compared the means of perceived value with actual customer experiences. The data were analyzed using SPSS and the results are given in the section following the hypotheses.

5. Results and Discussion

5.1 Descriptive Analysis

Table 1: Purpose of travel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	53	26.5	26.5	26.5
	Education	27	13.5	13.5	40.0
	Vacation	49	24.5	24.5	64.5
	VFFR	61	30.5	30.5	95.0
	Other	10	5.0	5.0	100.0
	Total	200	100.0	100.0	

Respondents reported various reasons for travelling on the airline. Out of 200 respondents, 53 were travelling for business purpose i.e. 26.5%, 27 were travelling for education purpose that is 13.5%, 49 were travelling on vacation i.e. 24.5%, 61 were travelling to visit friends, family and relatives (30.5%), the remaining 5% were travelling for other purposes. Another researcher used only four classifications for purpose of travel and the results reported in the earlier study were as follows (Huang, 2009). Business 43%, holiday 38 %, visit 10 %. The above listed criteria give more meaningful information about the passengers' profile and the airline managements can use this information to design their customer service offerings to appeal to various segments.

For example, business travelers prefer to read business newspapers or watch business channels.

They would also prefer a quieter environment for work or rest and more privacy. Thus various airlines have responded to the idiosyncratic needs of business travelers by increasing their service levels for business travelers both on the ground as well as in the air. Provision of complimentary limousine service is an example of a service enhancement in response to customer demand. On the other hand, if a large number of

families with small children travel on the airline, it would be appropriate to provide baby strollers as well as more passenger service personnel to provide assistance.

Table 2: Gender of passengers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	134	67.0	67.0	67.0
	Female	66	33.0	33.0	100.0
	Total	200	100.0	100.0	

Out of 200 respondents 134 respondents, that is 67%, are male while 66 respondents, that is 33%, are female. This result differs substantially from the results of a previous study where the relative percentages of males and females were 76% and 24% approximately (Huang, 2009). Through an analysis of the results preliminary conclusions can be drawn from the sample results that in the Pakistani domestic travel market, male passengers tend to outnumber female passengers. This information might be of use, for example, in designing additional service features or facilities tailored to appeal to female passengers travelling on certain routes or segments. It is only through the detailed analysis and multiple iteration of data that a trend may begin to emerge which points to a significant service gap which is considered as evidence by the airline management to warrant corrective action. Or it may indicate a trend of rising share of female passengers over a period of time perhaps reflecting their increasing level of participation in the work force. The need for frequent monitoring of the passengers' demographics cannot be over emphasized.

Table 3: Age distribution of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	age<=20	45	22.5	22.5	22.5
	20<age<=30	82	41.0	41.0	63.5
	30<age<=40	55	27.5	27.5	91.0
	40<age<=50	15	7.5	7.5	98.5
	age>=50	3	1.5	1.5	100.0
	Total	200	100.0	100.0	

Out of 200 respondents 22.5% are under 20 years, 41% of the respondents are between 20-30 years, 27.5% of the respondents are between 30- 40 years, 7.5% of the respondents are between 40-50 years, and 1.5% of the respondents are in the older than50 years age bracket. A clear picture emerges from the sample that the largest age bracket of travelers is between the ages of 20 and 40 years which reflects Pakistan's rapid rate of population growth. This is in sharp contrast to most Western nations which have an aging population profile and diminishing population growth rates. It also alerts us to the dangers of blindly

implementing the service strategies formulated by Western airlines which cater mainly to their own cultures and may not be appropriate for a less developed country like Pakistan. This result reiterates the need to conduct independent research in airline customer services area on an ongoing basis.

Table 4: Travel frequency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Once	116	58.0	58.0	58.0
	2-5 times	82	41.0	41.0	99.0
	6-10 times	2	1.0	1.0	100.0
	Total	200	100.0	100.0	

Most of the respondents have travelled once in an airline accumulating to 58%, 41% of respondents have travelled between 2-5 times whereas only 1% of the respondents travelled between 6-10 times. The main feature highlighted in this study is the large number of first time travelers. This indicates the importance of catering to the requirements of this market segment by employing more resources to inform and educate the new passengers about the norms of safety and benefits of air travel. Perhaps these passengers switched over to air travel from other modes of transport such as road and rail with the expectation of obtaining better service. This may also partly explain the significance of the scores given by the sample respondents to such dimensions as cabin service and cabin crew. The sample includes less than 1% of frequent travelers using the airline services more than 6 times in the last year.

5.2 Reliability Statistics

The following table shows the results for the Cronbach's Alpha test of reliability for each of the four constructs:

Table 5: Cronbach's Alpha

Construct	Items	Cronbach's Alpha	
		Perceived	Experienced
Convenience of booking	6	0.727	0.765
Cabin Services	10	0.864	0.762
Cabin Crew	3	0.536	0.602
Timeliness of flight	4	0.562	0.824

The reliability of the questionnaire and its internal consistency require statistical verification. 'Cronbach's alpha was used to assess internal consistency. Cronbach's alpha is the average of all possible split-half coefficients resulting from different ways of

splitting the scale items and a value of 0.6 or less generally indicates unsatisfactory consistency reliability (Malhotra et al, 1996)'. All the Cronbach's Alpha statistics are giving an acceptable result for all the constructs for perceived and actual experiences of the customers except two constructs, that are perceived Cabin Crew and perceived Timeliness of flight which are on the border of the acceptable range, the acceptable range being greater than 0.6.

Table 6: Descriptive Statistics

	N	Mean	Std. Dev.	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
PCB	200	3.7892	.64787	-.562	.172	-.155	.342
PCS	200	3.7985	.70750	-.515	.172	-.620	.342
PCC	200	3.9467	.69169	-.381	.172	-.558	.342
PTF	200	4.0725	.56187	-.660	.172	-.127	.342
ACB	200	1.8458	.46573	.453	.172	-.892	.342
ACS	200	1.7940	.38964	.732	.172	-.525	.342
ACC	200	1.8233	.55407	.749	.172	.306	.342
ATF	200	1.8363	.61217	.640	.172	.082	.342
Valid N (list wise)	200						

For the first four constructs of perceived importance of each factor related to quality of airline service, customers reported a high importance rating such as for perceived convenience of booking (3.79 $\pm$ .65), for perceived cabin service (3.79 $\pm$ .70), for perceived crew service (3.95 $\pm$ .69) and for perceived timeliness of flight (4.05 $\pm$ .56). These values all point towards the paramount perceived importance of these factors in the minds of the customers with the last factor being accorded the highest rating by the sample.

With respect to values obtained after actual experience of the customer with respect to airline service, the values show inconvenience experienced by customers with mean values of actual convenience of booking (1.85 $\pm$ .47), actual cabin service (1.79 $\pm$.39), actual cabin crew service (1.83 $\pm$ .55), actual timeliness of flight (1.84$\pm$ .61). Customers have reported dissatisfaction with these factors after actually experiencing them with the lowest rating being accorded to cabin service.

5.3 Inferential Analysis

Table 7: One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
PCB	200	3.7892	.64787	.04581
PCS	200	3.7985	.70750	.05003
PCC	200	3.9467	.69169	.04891
PTF	200	4.0725	.56187	.03973
ACB	200	1.8458	.46573	.03293
ACS	200	1.7940	.38964	.02755
ACC	200	1.8233	.55407	.03918
ATF	200	1.8363	.61217	.04329

The mean score for perceived convenience of booking is (3.79 $\pm$ .65), perceived cabin service is (3.79 $\pm$ .71), perceived cabin crew is (3.95 $\pm$ .69.), perceived timeliness of flight is (4.07 $\pm$ .56) whereas the mean score for actual convenience of booking is (1.85 $\pm$ .47), actual cabin service is (1.79$\pm$ .39), actual cabin crew is (1.82 $\pm$ .55) and actual timeliness of flight is (1.84$\pm$ .61).

Table 8: One-Sample *t* Test

	Test Value = 3				95% Confidence Interval of the Difference	
	t	d.f.	Sig. (2-tailed)	Mean Diff.	Lower	Upper
PCB	17.227	199	.000	.78917	.6988	.8795
PCS	15.961	199	.000	.79850	.6998	.8972
PCC	19.355	199	.000	.94667	.8502	1.0431
PTF	26.995	199	.000	1.07250	.9942	1.1508
ACB	-35.047	199	.000	-1.15417	-1.2191	-1.0892
ACS	-43.772	199	.000	-1.20600	-1.2603	-1.1517
ACC	-30.034	199	.000	-1.17667	-1.2539	-1.0994
ATF	-26.885	199	.000	-1.16375	-1.2491	-1.0784

There is a statistically significant difference between all perceived means and the median value of the Likert scale i.e. 3. All the observed means of perceived values are higher than 3 which shows the level of the respondents perceived scores are aligned with satisfaction of booking t(199) = 17.23, p = 0.000. This makes us reject our first hypothesis, that is, Convenience of booking is an insignificant service variable.

All the observed means of perceived values are higher than 3 which shows the level of the respondents perceived scores are aligned with satisfaction of cabin service, $t(199)= 15.96$, $p = 0.000$. This makes us reject our second hypothesis, that is, Cabin service is an insignificant service variable. All the observed means of perceived values are higher than 3 which shows the level of the respondents perceived scores are aligned with satisfaction of cabin crew, $t(199)= 19.36$, $p = 0.000$. This makes us reject our third hypothesis, that is, Cabin crew is an insignificant service variable. All the observed means of perceived values are higher than 3 which shows the level of the respondents perceived scores are aligned with satisfaction of timeliness of flight, $t(199)= 26.99$, $p = 0.000$. This makes us reject our fourth hypothesis, that is, timeliness of flights is an insignificant service variable.

There is statistically significant difference between the obtained mean score for actual convenience of booking and test mean score for normal convenience of booking $t(199) = -35.047$, $p = 0.000$. This makes us reject our fifth hypothesis, that is, 'There is no significant difference between customers' perceived quality of convenience of booking and what they experienced. There is statistically significant difference between the obtained mean score for actual cabin service and test mean score for cabin service, $t(199)= -43.77$, $p = 0.000$. This makes us reject our sixth hypothesis, that is, 'There is no significant difference between customers' perceived cabin services quality and what they experienced'. There is statistically significant difference between the obtained mean score for actual cabin crew and test mean score for cabin crew, $t(199)= -30.034$, $p = 0.000$. This makes us reject our seventh hypothesis, that is, 'There is no significant difference between customers' perceived cabin crew credibility quality and what they experienced'. There is statistically significant difference between the obtained mean score for actual timeliness of flight and test mean score for timeliness of flight, $t (199) = -26.887$, $p = 0.000$. This makes us reject our eighth hypothesis, that is, 'There is no significant difference between customers' perceived quality of timeliness of flights and what they experienced'.

On the contrary, the actual averages of what the respondents experienced during their travel are significantly lesser than 3 which signifies that their experiences show dissatisfaction with the quality of service provided by the airlines.

Table 9: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PCB	3.7892	200	.64787	.04581
	ACB	1.8458	200	.46573	.03293
Pair 2	PCS	3.7985	200	.70750	.05003
	ACS	1.7940	200	.38964	.02755
Pair 3	PCC	3.9467	200	.69169	.04891
	ACC	1.8233	200	.55407	.03918
Pair 4	PTF	4.0725	200	.56187	.03973
	ATF	1.8363	200	.61217	.04329

Paired sample *t* test is applied to test the differences between perceived and actual experiences of respondents with the airline service quality. The descriptive table above shows a clear difference in mean score of each construct of perceived airline service quality and their actual experiences.

Table 10: Paired Samples Test

Paired Differences							
		Mean	Std. Devi.	Std. Er. Mean	95% Confidence Interval of the Difference		t
					Lower	Upper	
Pair 1	PCB – ACB	1.94333	.79947	.05653	1.83186	2.05481	34.376
Pair 2	PCS – ACS	2.00450	.81428	.05758	1.89096	2.11804	34.814
Pair 3	PCC – ACC	2.12333	.93227	.06592	1.99334	2.25333	32.210
Pair 4	PTF - ATF	2.23625	.80677	.05705	2.12376	2.34874	39.200

The inferential table of paired sample *t* test is showing that there is a statistically significant difference in perception of customers with respect to convenience of booking and their actual experiences, $t(199) = 34.38$, $p < 0.05$. Customers have reported a mean difference of ($1.94 \pm .79$) for their perception of importance of convenience of booking and their actual experience with it. They found that it is a very important factor ($3.79 \pm .65$) but after having a real time experience they found that it is much less convenient in

the particular airline service they traveled in with a mean difference of (1.85 ± .47). With these findings we thus failed to accept our fifth hypothesis, that is, "There is no significant difference between customers' perceived quality of convenience of booking and what they experienced". The second pair PCS- ACS also reported that there is a statistically significant difference between the customers' perception of cabin service and their actual experience with it, $t(199)=34.81$, $p < 0.05$. With these findings we thus failed to accept our sixth hypothesis, that is, "There is no significant difference between customers' perceived cabin services quality and what they experienced". With respect to the third pair, PCC-ACC of cabin crew service the customers again reported a statistically significant difference (2.13±.93) in their perceived importance of cabin crew and actual experience with it, $t(199)=32.21$, $p< 0.05$. With these findings we thus failed to accept our seventh hypothesis, that is, "There is no significant difference between customers' perceived cabin crew credibility and what they experienced".

With respect to the fourth pair, (PTF-ATF) customers also reported a statistically significant difference in importance of timeliness of flight and actual experience with it, $t(199) =39.2$, $p < 0.05$. With these findings we thus failed to accept our eighth hypothesis, that is, "There is no significant difference between customers' perceived timeliness of flight and what they experienced".

The results of our study are consistent with Archana and Subha (2012) study, where they have incorporated experiences of customers with respect to different domestic Indian airlines services.

It was revealed in the study that food service and variables related to seating of passengers are very important. Another important factor mentioned therein is the convenience of booking with respect to online booking. These findings are consistent with our construct of cabin service and convenience of booking which are reported as significant variables in our results. As compared to the results reported by Feng and Jeng (2005), we find the respondents rated flight timeliness as the most important variable followed by ground service, cabin service, baggage delivery and complaint response respectively. They were most satisfied with seat reservation and flight safety variables. These findings are consistent with our results to the extent of importance of flight timeliness and cabin services respectively.

The results of this study are generally in consonance with the results of De Jager et al. (2012) who found similar views regarding the relative importance of factors in two separate samples. Our results are also supported by the findings of Park et al. (2005) who found that with reference to the Australian market, airline marketing managers should develop various strategies to guarantee providing quality services to passengers because airline service dimensions were found to have significant and positive influence on airline image as well as passengers' behavioral intentions.

The study based on the overall research structure attempts to explain how the gap between Importance and Performance can be appropriately handled with the composition of different service items. Once the methodology has been clearly understood, it is expected that the user airlines can gain multiple benefits like increased retention of

customers, reduced sources of customer dissatisfaction and mitigation of service failures, reduced number of complaints, and quicker service recovery, ultimately leading to an increase in market share and profitability. The airlines stand to reduce the risk of wasting their valuable and scarce resources and redirecting service efforts to the most critical areas.

The customers' comments regarding their airline selection criteria also indicated their level of dissatisfaction with the quality of air services provided. Their main grievances related to timeliness of flights and cabin services. While informally discussing their travel experiences, some of the passenger specifically mentioned old aircraft, shabby seat upholstery, stained carpets, inattentive cabin crew and dirty toilets as their main grievances. Other passengers talked about the need for airlines to offer enhanced services for economy class passengers like provision of baby strollers, better quality reading material, and provision of in-flight mobile phone facility.

6. Conclusion

The preceding discussion has highlighted the need for a systematic method for monitoring and improving the service quality of airline customer services on the domestic routes in Pakistan. The results show a significant level of dissatisfaction with the services being currently provided on the domestic routes and this research has attempted to develop a robust methodology to help the airlines to arrest this trend. The results provide conclusive evidence of the low levels of airline service quality and highlight the need to take urgent steps to improve the quality of service by all the domestic airlines. Each of the hypotheses tested for this study provides significant evidence of the poor service quality which persists in the domestic airline industry despite complaints in the media.

Secondly, if the level of customer service provided by the various domestic airlines improves, their profitability will also improve and result in sustainable growth and a larger contribution of the civil aviation sector to the economy of Pakistan. Due to constraints of time and resources this research study was limited to purely domestic sector passengers. Foreign passengers and non-domestic airline companies are not in the scope of this study. Future research studies could target international travelers with a view to incorporating their expectations while designing service offerings on international flights.

6.1 Recommendations

Research findings from this study highlight the gaps in customer service being experienced by passengers traveling on the domestic airlines in Pakistan and provide insights into the underlying factors of service expectation and levels of satisfaction. A relatively simple and economical tool for monitoring the quality of airline passenger services has been developed for improvement in their services. Airlines can start with simple steps to initiate quality improvement such as creating awareness among all their employees about the importance of providing quality service to their customers. This can be supplemented by formal training in service quality improvement. Even with these simple and inexpensive steps the airlines can start reaping benefits by empowering the

front-line employees to serve the passengers. Training programs may be followed by organizational realignment to make the customer the focus of all activities. This will require full commitment of all employees but especially at the board level.

Airlines should also make use of the growing number of talented business school graduates who are being produced in the top tier institutions and employ them in various departments to accelerate the pace of improvement in service quality levels. In the long run substantial and sustainable improvement in domestic airlines services will require massive investments in new aircraft, navigational aids to improve all weather flight operations and safety.

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