

Passengers' Satisfaction from the Onboard Service Quality of Saudi Airlines – An Empirical Study

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Abstract

Purpose: The study investigated the satisfaction of passengers from the onboard service quality of Saudia, Saudi Arabian airlines. The study also aimed at suggesting the Saudi Airlines to prepare for the competition after liberalization of the Saudi Aviation Industry.

Methodology: This is quantitative study based on primary data collected from the passengers of Saudi Airlines. A close-ended structured questionnaire had been distributed randomly. The questionnaire was developed in English and translated into Arabic for high response among the passengers who ever travelled by Saudi Airlines. The researcher used Convenience sampling technique to identify the respondents who came from across the country for counseling classes at college of business and writing their final exams. The study sample size was 400 respondents.

Findings: The passenger's satisfaction from the onboard services was low.

Key Words: Saudi Airlines, Service Quality, Saudi Arabia, Satisfaction

INTRODUCTION

The aviation industry in Saudi Arabia is under reforms. The market currently served by the government owned Saudi Airlines should open for competition from international airlines and indigenous companies. The Saudi government is working hard in developing the industry through infrastructure development, privatization and market liberalization. Presently, the national carrier Saudi Airlines (now renamed as Saudia) and low cost carrier Nas Air serve market. After liberalization of the industry, the market will open to foreign airlines promoting significant growth. In preparation, Saudia planned to expand its fleet to 125, which will include 50 Airbus 320s, 321s, and 330s, Boeing 777s and Boeing 787s by 2015. Besides this, the government planned to upgrade existing Airports and Build 34 new Domestic Airports. Prince Mohammed Bin Abdulaziz International Airport expansion in Madinah is the first airport in the GCC developing on a Public Private Partnership (PPP) basis. There is plan worth \$11.3 billion expansion of King Abdulaziz International Airport in Jeddah to increase capacity to 80 million passengers by 2035. International airports witnessed a 15.7% passenger increase in 2010 to reach 17.7 million. Thus, it is certain that the Saudi Aviation industry will soon become an open market for airlines from across the world. The passengers flying to and from Saudi Arabia will then have choices in selecting airlines. According to Tae et al (2010), liberalization of the air transport has two major influences namely; first, substantial economic and traffic growth, which is due to increased competition and efficiency gains in the airline industry, as well as positive externalities to the overall economy. Second, it allows the airlines to optimize their networks within and across continental markets. The changing market structure from monopoly to competition for Saudia gets a situation where the indigenous company needs an all-round analysis for identifying the gaps and filling the gaps prior to facing competition. One such area of analysis is the satisfaction of the

passengers from the service quality of Saudia. This study is important because the findings of previous studies showed that customer satisfaction has strong influence on the customer retention and business effectiveness of a firm (Kwong et. al., 2009). To remain competitive the Saudia must deliver high quality of services. Thus, this study aimed to find out the passengers satisfaction from the service quality of Saudia, which will support the Saudia management in planning their services in future.

REVIEW OF LITERATURE

Customer satisfaction due to its importance had been a topic of interest since long for the researchers. According to Levesque & McDougall (1996), Satisfaction is an overall customer attitude towards a service provider. This attitude formed through the experience with the service quality provided by the organization. According to Zineldin (2000), it is an emotional reaction to the difference between what customers anticipate and what they receive. Further, defined, as “the customer’s fulfillment response”. It is a judgement that a product or service feature, or the product of service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under – or over fulfillment (Oliver, 1997). According to Zeithaml and Bitner (2003), if a product meets the need of the consumer, it is termed as customer satisfaction and customer satisfaction plays important role in retaining customers. Consumers evaluate service on technical dimension ‘what is delivered’, and functional dimension ‘how it is delivered’ (Gronroos, 1983; Hill, 1986; Richard & Allaway, 1993; Walker & Baker, 2000).

Service Quality and customer satisfaction: Researches showed that there is positive correlation between service quality and customer satisfaction. Which means that good service quality increases the customer satisfaction. On the other hand, customer satisfaction is an indicator of good service quality. Better service quality resulted into greater customer satisfaction and reduced customer erosion (Leeds, 1992). According to Dong and Dresner (2012), improved customer service increases the customer satisfaction, which improves, the company’s performance. Customer satisfaction has a strong influence on the customer retention and business effectiveness of a firm (Kwong et al., 2009). According to the study of Reichheld & Sasser (1990), customer satisfaction is a penchant for the defense to retain customers rather than for the offence to find new customers in a competitive environment. Customer satisfaction is a crucial factor of competitive advantage and helps to create the success for a company (Kim & Lee, 2011). There is proportional relationship between customer service, customer satisfaction, and business performance, thus providing higher service quality, increases customer satisfaction which in turn leads to better performance results, the company earns higher profits (Banker & Mashrana, 2007; Behn & Riley, 1999; Dresner & Xu, 1995; Sim et al., 2010). There is significant relationship between service quality and customer satisfaction, which means that good service quality, will satisfy a customer (Mukarramah & Sulaimon, 2014). Companies enhance satisfaction and customer loyalty by understanding customer’s requirements and meeting their expectations through high quality goods and services (Bui and Nguyen, 2004). Many researches showed that service quality leads to customer satisfaction enhancement, which influences the customer’s behaviour positively, they share the satisfaction with others, and they develop loyalty and continue with the same firm (Lee, 2011; Danaher, 1997; Magi & Julander, 1996; Levesque & McDougall, 1996; Bitner, 1990). Service quality is antecedent of the customer satisfaction (Cronin et al., 2000; Anderson et al., 1994; Cronin and Taylor, 1992). Service quality has strong impact on business performance, lower costs, return on investment, customer satisfaction, customer loyalty, and gaining higher profits (Leonard and Sasser, 1982; Gammie 1992; Hallowell 1996; Chang and Chen 1998; Gummesson 1998; Lasser et al., 2000; Newman, 2001; Sureshchander et al., 2002; Seth and Deshmukh, 2005). Customer satisfaction also serves as an exit barrier, helping a firm to retain its customers (Fornell, 1992; Halstead and Page 1992). Satisfied customers also

have fewer complaints thus reducing the handling cost (Fornell et al., 1996; Spreng et al., 1995). The findings of the researches suggested that satisfied customers are willing to pay more for the benefits they receive and are more likely to be tolerant of an increase in price (Fornell et al., 1996; Anderson et al., 1994). Dong and Desner (2012) supported the relation between service factor and customer satisfaction. He suggested that customer satisfaction can increase by improving the customer service factor and as a result, the company's performance will be better.

The deregulation in Airline industry has increased the competition, thus service quality and customer satisfaction gained attention in this industry (Denette et al., 2000). Saudi Arab airline industry shall also be open market; multinational airlines will enter and try to attract the Saudi Airlines passengers. Research showed that most airlines offer various incentives such as the frequent flyer programmes to build and maintain the customer loyalty (Miller and Hotz, 1993). Airline companies attempted to differentiate their services (Lee and Cunningham, 1996) but the passengers did not perceive any difference from one carrier to another (Ott 1993). Ostrowski et al., (1993) noted that when all airline companies have comparable fares and matching frequent flyer programs, the company with better-perceived service would draw passengers from other carriers.

Thus, the above review of literature established the importance of customer satisfaction. The customer satisfaction is indicator of service quality. Customer satisfaction influence a company in the following ways; customer retention, customer loyalty, reduced customer erosion, improved organizations performance, enhanced business effectiveness, higher profits for the company, encourages positive word of mouth from the customers, gets positive behaviour from the customers, minimizes the complains thus lowers complaints handling cost. The customer satisfaction is very important for survival, and growth of any business. Established the relationship between service quality and customer satisfaction, this study measures the passenger's satisfaction as an indicator of service quality, where higher passenger satisfaction assumed to represent high service quality and the low passenger's satisfaction represents low service quality. The study proposes the following simple model of study in this research where "service quality leads to passengers (customers) satisfaction and the passenger satisfaction indicates service quality.

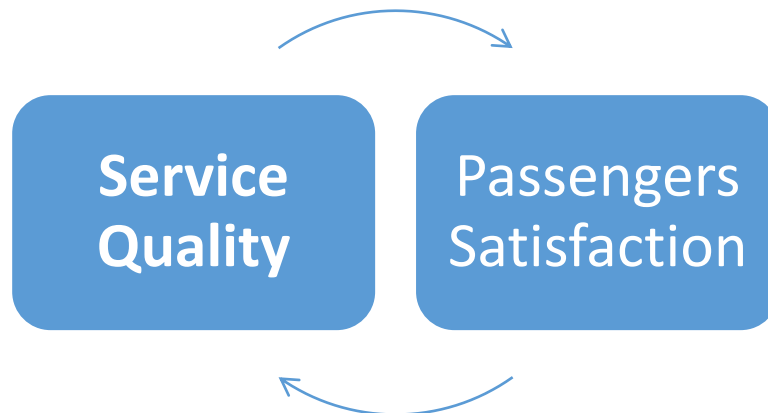


Figure 1

HYPOTHESES

From the review of literature the researcher proposes the following service variables for measuring the satisfaction of the of Saudi airline passengers. The hypotheses are;

- H1 Passengers are satisfied with the behaviour of crewmembers in Saudi Airlines.
- H2 Passengers are satisfied with the seat numbers of Saudi Airlines.
- H3 Passengers are satisfied with the seat comfort of Saudi Airlines.
- H4 Passengers are satisfied with the cleanliness of the cabin of Saudi Airlines.
- H5 Passengers are satisfied with the reading materials in the Saudi Airlines.
- H6 Passengers are satisfied with the airline magazine in Saudi Airlines.
- H7 Passengers are satisfied with the inflight entertainment standards of Saudi Airlines
- H8 Passengers are satisfied with the Audio/video programming of Saudi Airlines.
- H9 Passengers are satisfied with the Meal choices of the Saudi Airlines.
- H10 Passengers are satisfied with the Food quantity of the Saudi Airlines
- H11 Passengers are satisfied with the Food quality of the Saudi Airlines.
- H12 Passengers are satisfied with the Safety instructions of the Saudi Airlines.
- H13 Passengers are satisfied with the Emergency services of the Saudi Airlines.
- H14 Passengers are satisfied with the Sky sales of the Saudi Airlines.
- H15 Passengers are satisfied with the Cabin ambience of the Saudi Airlines.

STATEMENT OF THE PROBLEM

The Aviation industry of Saudi Arabia is going through the process of liberalization. The industry will be an open market for many huge and established brands from across the world. It is appropriate that the Saudia introspects and prepares itself for the competition. Measurement of the Passengers satisfaction is an important tool to identify the strength and weakness of the services. Therefore, at this stage just before the liberalization of the Saudi Arabian aviation industry, the findings of the study will help the company in strengthening the services by filling the gaps which in turn will help in retaining its passengers, who may in other case move to the competitors if not satisfied.

OBJECTIVES OF THE STUDY

The researcher conducted the study with two fold objectives. First to find out the satisfaction of the passengers from the onboard service quality of the Saudia, and second, based on the findings provide a guideline highlighting the area(s) of services, which need attention of the Saudia management.

METHODOLOGY

Survey Instrument: This research is a quantitative study based on primary data collected from passengers of Saudia. The researcher collected data through a structured close-ended questionnaire, originally developed in English and translated into Arabic for the convenience of the respondents, as they were mostly Arabic speakers. Fifteen variables were identified to

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represent the various onboard services of an aeroplane given in table 1. Level of passenger satisfaction were measured on five point Likert scale. The rating used were 5 to 1 on which, 5 equal to Highly Satisfied, 4 equal to Satisfied, 3 equal to Somewhat Satisfied, 2 equal to Dissatisfied, and 1 equal to Highly Dissatisfied.

Sampling technique: Convenience sampling methodology identified the respondents to administer the questionnaire. The sample consisted of group of individuals pursuing bachelor degree in various specializations in business from College of Business Rabigh, King Abdulaziz University. The respondents came to the campus for counseling classes before the exam and then for the exam. They came from different parts of the country to write the final exam, thus representing almost the entire country of Saudi Arabia. All the respondents were employees in various companies in the country. The respondents were in all age groups. The researcher administered questionnaires on confirmation that the respondent had travelled by Saudia. The sample size was 400 respondents.

Analysis of data: Percentage, frequencies, mean and standard deviation were the statistical tools for analysis. For the testing of hypotheses ANOVA and t-test, tested the variance and significance of the results. Cronbach Alpha measured the reliability of data.

EMPIRICAL RESULTS

Reliability of data

To assess the internal consistency and reliability of the data Cronbach's Alpha was used. Results in Table 1 showed that the collected data was highly consistent and reliable with the value of .924. Pallant (2004) said that reliability scores more than 0.70 are acceptable but in this case, the result in table 1 is very at 0.924 indicating the high consistency and reliability of data.

Table 1; Reliability Test

On Board services – Inside the plane	.924
Behaviour of crew members	
Seat numbers	
Seat Comfort	
Cleanliness of the Cabin	
Reading materials	
Airline magazine	
Inflight entertainment standards	
Audio/Movie programming	
Meal choices	
Food Quantity	
Food Quality	
Safety instructions	
Emergency services	
Sky sales	
Cabin Ambience	

Customer Satisfaction - Onboard Services (inside the plane) of Saudi Airlines

Customer satisfaction from onboard services (inside the plane) of Saudi was measured through 15 variables presented in table 2 and table 3. The results show that the customer satisfaction from the onboard services was not very satisfactory. The mean value in table 2 showed that from 15 variables the mean value of 8 were greater than 3 and 6 variables mean values were less than 3. The mean value greater than 3 indicated satisfaction and less than 3 indicated dissatisfaction. In

most of the cases the mean value is just above 3 indicating somewhat satisfaction of the passengers; all have mean value less than 4. The mean values showed that the customers were either somewhat satisfied or were not satisfied from it. Table 3 showed the percentage of passengers satisfied. There were five variables for which more than 50% of the passengers were satisfied namely; cooperation from the crew members 59%; seat numbers 53%; cleanliness of the cabin 54%; safety instructions 58%; and for emergency services 55%. The variables for which percentage was less than 50%, it was low as 25% for Inflight entertainment standards; meal choices 28%; and meal quantity 27.5%. Onboard services represent the services of airline company (Saudia).

Table 2: Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	N	Mean	S.D	H.D	D.S	S.S	S	HS
Behaviour of crew member	40	3.56	1.14	33	30	100	154	83
	0		4					
Seat number	40	3.48	1.22	41	34	112	119	94
	0		8					
Seat comfort	40	2.96	1.24	63	77	125	85	50
	0		0					
Cleanliness of the cabin	40	3.45	1.22	39	46	96	134	85
	0		1					
Reading materials	40	2.94	1.32	83	59	114	88	56
	0		6					
Airline Magazine	40	3.01	1.27	69	63	116	98	54
	0		9					
In-flight entrainment standards	40	2.51	1.32	127	80	91	67	35
	0		3					
Audio/ Movie programming	40	2.77	1.33	99	67	113	71	50
	0		6					
Meal choices	40	2.73	1.28	92	81	113	71	43
	0		9					
Food Quantity	40	2.71	1.29	95	79	116	67	43
	0		0					
Food Quality	40	2.81	1.32	91	73	106	80	50
	0		7					
Safety instructions	40	3.61	1.26	39	34	95	110	122
	0		8					
Emergency services	40	3.50	1.26	44	37	97	120	102
	0		8					
Sky sales	40	3.16	1.23	54	57	118	112	59
	0		7					
Cabin ambience	40	3.22	1.21	49	53	120	119	59
	0		1					

SD = Standard deviation/ HD = Highly Dissatisfied/ DS=Dissatisfied/ SS=Somewhat satisfied/ S= Satisfied/ HS= Highly satisfied

Table 3: Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Percentage
Behaviour of crew member	59.3
Seat number	53.3

Seat comfort	33.8
Cleanliness of the cabin	54.8
Reading materials	36.0
Airline Magazine	38.0
In-flight entertainment standards	25.5
Audio/ Movie programming	30.3
Meal choices	28.5
Food Quantity	27.5
Food Quality	32.5
Safety instructions	58.0
Emergency services	55.5
Sky sales	42.8
Cabin ambience	44.5

Cross sectional analysis of passengers' satisfaction; In this section the passenger's satisfaction from onboard services are analyzed across six variables namely; Nationality, Class of travel (Business, economy, & both); Duration of travel by Saudi Airlines; Distance of travel (Domestic, International & Both); Experience of traveling by other airlines; Membership of AlFursan (Loyalty Program of Saudi Airlines).

The results in table 4 and figure 1 present a comparative analysis of passengers' satisfaction across nationality (Saudi nationals and expatriates). There were 365 Saudi respondents and 35 Non Saudi respondents. ANOVA analysis of satisfaction shows that the non-Saudi passengers are comparatively more satisfied than the Saudi passengers indicated by the mean values. However, comparatively non-Saudis are satisfied but their satisfaction level individually is not high as indicated by the mean values, which is above three in most of the cases but less than four for all the variables. Non Saudi were not satisfied with inflight entertainment standards mean value 2.77, and for Audio/Movie programming mean value 2.94. For most of the variables, the difference between Saudi and Non-Saudi nationals were not statistically significant except for seat comfort, cleanliness of the cabin, meal choice, food choices, food quantity, and cabin ambience were the variance were statistically significant.

Table 4: ANOVA - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Saudi			Non Saudi			F	df	Sig.
	N	Mean	Std. dev.	N	Mean	Std. dev.			
Behaviour of crew member	365	3.55	1.156	35	3.71	1.017	.697	1	.404
Seat number	365	3.46	1.237	35	3.63	1.140	.580	1	.447
Seat comfort	365	2.90	1.246	35	3.54	1.010	8.793	1	.003
Cleanliness of the cabin	365	3.41	1.240	35	3.91	.887	5.609	1	.018
Reading materials	365	2.92	1.336	35	3.09	1.222	.479	1	.489
Airline Magazine	365	3.00	1.298	35	3.17	1.071	.591	1	.442
Inflight entertainment	365	2.48	1.32	35	2.77	1.330	1.529	1	.217

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standards			1	5					
Audio/ Movie programming	365	2.75	1.33	3	2.94	1.327	.679	1	.410
Meal choices	365	2.69	1.30	3	3.17	1.043	4.539	1	.034
Food Quantity	365	2.65	1.29	3	3.37	1.060	10.313	1	.001
Food Quality	365	2.75	1.33	3	3.46	1.094	9.234	1	.003
Safety instructions	365	3.59	1.29	3	3.74	.886	.453	1	.501
Emergency services	365	3.47	1.29	3	3.77	.910	1.792	1	.181
Sky sales	365	3.16	1.24	3	3.17	1.150	.002	1	.964
Cabin ambience	365	3.16	1.22	3	3.80	.901	9.127	1	.003

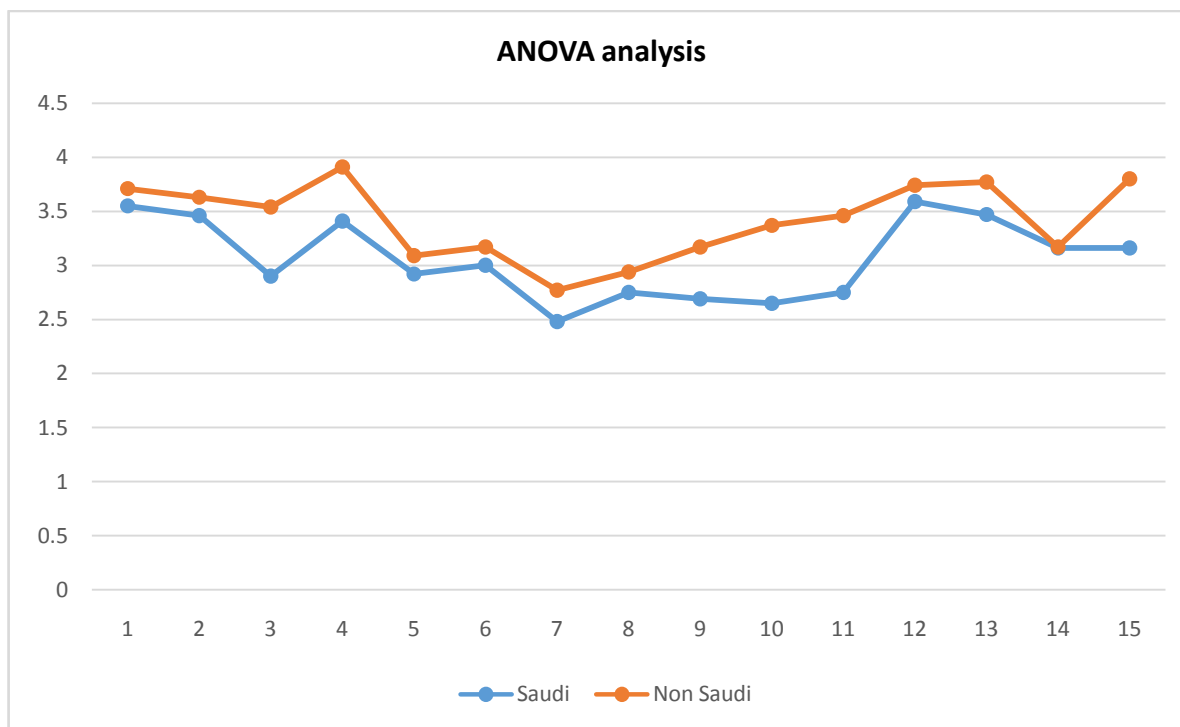


Figure 2; Satisfaction on nationality

Passenger’s satisfaction across the class of travel; Results in table 5 and figure 3 compared the satisfaction of passengers according to the class of their travel namely; business class, economy class and both. There were 39 respondents travelled by business class, 229 respondents travelled by economy class, and 132 respondents travelled in both the classes. The results of ANOVA showed that the passengers travelled with business class were comparatively more satisfied than (DOI: [dx.doi.org/14.9831/1444-8939.2015/3-8/MRR.02](https://doi.org/10.1444/8939.2015/3-8/MRR.02))

the passengers travelled by economy class and both the classes. Individually and collectively, the passengers were not satisfied instead were somewhat satisfied as indicated by the mean value three and around three but less than four for all the three classes of travel. The mean value for the economy class passengers in comparison to business class passengers is higher indicating higher satisfaction in the following three variables namely; behaviour of the crewmember, seat numbers, safety instructions, and cabin ambience. The low satisfaction of the business class passengers may be due to the higher expectations of the business class passengers. The satisfaction level of passengers travelled by both the classes is low in comparison to other class passengers. However, the travelers in 'both class' were more satisfied compared to business class passengers for the cabin ambience. The results are not statistically significant.

Table 5: ANOVA - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Business Class			Economy			Both			F	df	Sig
	N	Me an	Std. Dev	N	Me an	Std. Dev.	N	Mea n	Std. Dev.			
Behaviour of crew member	39	3.4 4	1.2 52	229	3.6 3	1.062	13 2	3.47	1.244	1.109	2	.33 1
Seat number	39	3.3 3	1.1 32	229	3.5 2	1.194	13 2	3.45	1.316	0.399	2	.67 1
Seat comfort	39	3.3 6	1.1 35	229	2.9 5	1.248	13 2	2.85	1.239	2.582	2	.07 7
Cleanliness of the cabin	39	3.5 4	1.2 74	229	3.4 8	1.230	13 2	3.37	1.194	0.447	2	.64 0
Reading materials	39	3.1 8	1.2 11	229	2.9 7	1.354	13 2	2.80	1.304	1.417	2	.24 4
Airline Magazine	39	3.1 0	1.0 21	229	3.0 3	1.309	13 2	2.95	1.301	0.254	2	.77 6
Inflight entertainment	39	2.7 7	1.2 24	229	2.5 1	1.340	13 2	2.42	1.320	1.026	2	.35 9
Audio/ Movie programming	39	2.8 7	1.3 80	229	2.7 7	1.341	13 2	2.72	1.321	0.204	2	.81 6
Meal choices	39	2.8 5	1.2 47	229	2.7 7	1.292	13 2	2.63	1.298	0.667	2	.51 4
Food Quantity	39	2.9 0	1.1 88	229	2.6 9	1.309	13 2	2.68	1.292	0.459	2	.63 3
Food Quality	39	2.8 2	1.2 95	229	2.8 0	1.325	13 2	2.83	1.351	0.013	2	.98 8
Safety instructions	39	3.4 9	1.3 74	229	3.6 2	1.246	13 2	3.62	1.281	0.187	2	.83 0
Emergency services	39	3.5 4	1.4 11	229	3.4 8	1.238	13 2	3.52	1.287	0.054	2	.94 8
Sky sales	39	3.2 3	1.1 58	229	3.1 5	1.244	13 2	3.17	1.255	0.075	2	.92 8
Cabin ambience	39	3.1 0	1.4 10	229	3.2 2	1.180	13 2	3.23	1.210	0.190	2	.82 7

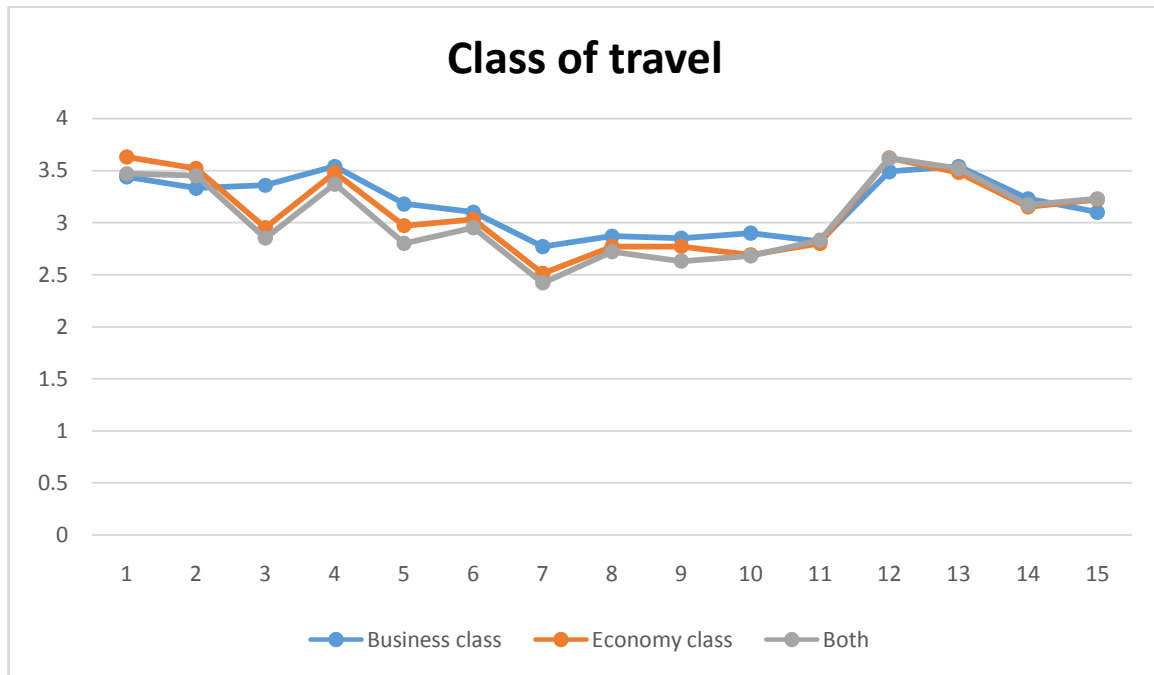


Figure 3; Satisfaction across the class of travel

Passenger satisfaction according to the duration of experience of using the services of Saudia (for how long they have been travelling by Saudia)

Results in table 6 and figure 4 classified and compared the satisfaction of passengers according to the duration they had used the services of Saudia. The duration of experience of the passengers were classified into three categories namely; less than 6 years, 6 to 10 years, and more than 10 years. The satisfaction line in figure 4 clearly show that the passengers using the services of Saudi Airlines for more than 10 years are least satisfied in the group. The low satisfaction is for all the variables without exception. The other two groups 'less than 6 years' and '6 to 10 years' were more or less satisfied. However, all the three groups were in general only somewhat satisfied indicated by the mean value less than 4 in all the categories and for all the variables. The variance in all the three groups are not statistically significant except for inflight entertainment (.001) and Audio/movie entertainment (.001).

Table 6: ANOVA - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Less than 6 years			6 to 10 years			More than 10 years			F	d	Sig
	N	Me an	Std. Dev.	N	Me an	Std. Dev.	N	Mea n	Std. Dev.			
Behaviour of crew member	165	3.67	1.067	105	3.70	1.126	130	3.31	1.219	4.806	2	.009
Seat number	165	3.45	1.227	105	3.68	1.236	130	3.35	1.213	2.091	2	.125
Seat comfort	165	3.08	1.227	105	3.10	1.232	130	2.67	1.222	5.234	2	.006
Cleanliness of the cabin	165	3.64	1.185	105	3.53	1.152	130	3.15	1.270	6.356	2	.002
Reading materials	165	3.01	1.314	105	3.12	1.299	130	2.70	1.339	3.383	2	.035
Airline Magazine	165	2.99	1.232	105	3.23	1.280	130	2.86	1.322	2.438	2	.089
Inflight entertainment	165	2.64	1.330	105	2.75	1.371	130	2.15	1.201	7.684	2	.001
Audio/ Movie programming	165	2.94	1.310	105	2.93	1.396	130	2.41	1.256	7.102	2	.001
Meal choices	165	2.82	1.265	105	2.77	1.317	130	2.58	1.293	1.269	2	.282
Food Quantity	165	2.77	1.281	105	2.70	1.379	130	2.64	1.233	.376	2	.687
Food Quality	165	2.85	1.265	105	2.87	1.394	130	2.72	1.354	.517	2	.597
Safety instructions	165	3.65	1.234	105	3.70	1.202	130	3.48	1.360	1.026	2	.359
Emergency services	165	3.52	1.257	105	3.54	1.271	130	3.43	1.288	.275	2	.760
Sky sales	165	3.11	1.264	105	3.37	1.227	130	3.06	1.199	2.096	2	.124
Cabin ambience	165	3.28	1.218	105	3.33	1.222	130	3.04	1.184	2.122	2	.121

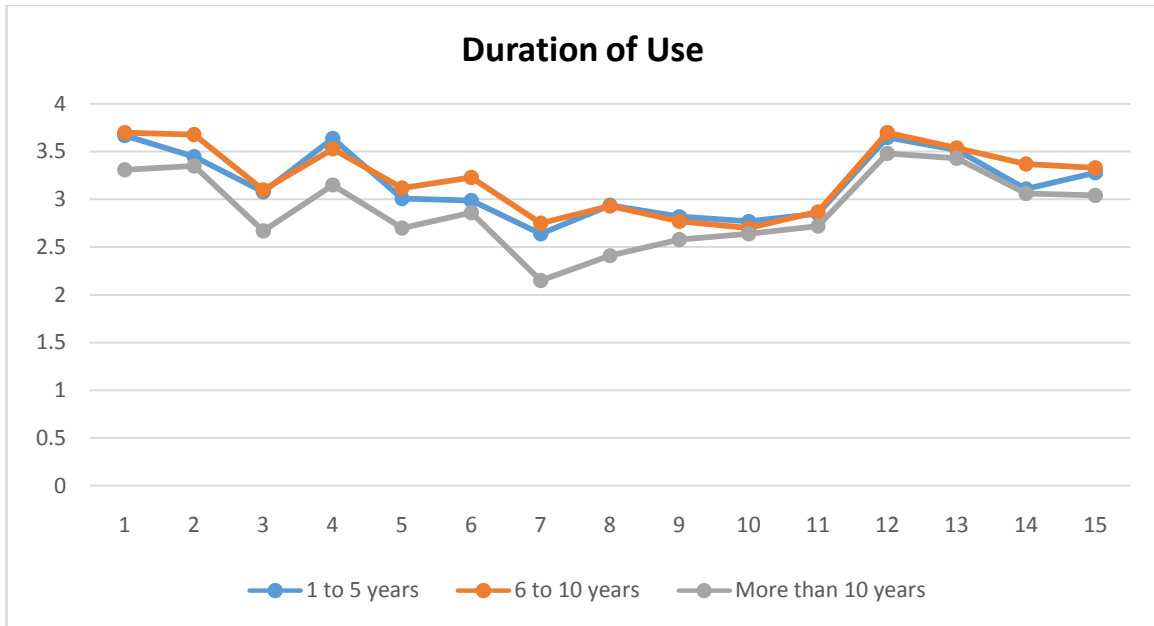


Figure 4: Satisfaction as according to use of Saudi Airlines Services

Passenger satisfaction according to the destination travelled by the passengers by Saudia(domestic, international or both)

Results in table 7 and figure 5 classified and compared the satisfaction of passengers according to the destination they travelled by Saudia namely; domestic, international and both. The satisfaction line in figure 4 clearly show that the international passengers were comparatively more satisfied as compared to other two groups. The main difference between domestic and international flights were in the following areas namely; reading materials, airline magazine, inflight entertainment standards, audio/movie programming, meal choices, seat numbers, seat comforts, food quantity and food quality. The international passengers were more satisfied. The difference is but obvious because for long routes, bigger aircrafts are used which are usually equipped with better facilities. However, in this case also the satisfaction across the three categories somewhat differ from each other but overall satisfaction is low indicated by the mean value less than 4 for all the variables in all the three categories. The mean values hovered over 3 indicating only somewhat satisfaction of the passengers and in many cases the mean values are less than 3. The variance is not statistically significant as shown in table 8 except for food quantity, which is statistically significant (.006) and meal choices (.012).

Table 7: ANOVA - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Domestic			International			Both			F	d	Sig.
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	N	Mean	Std. Dev.			
Behaviour of crew member	189	3.52	1.183	44	3.75	1.014	167	3.56	1.133	.730	2	.482
Seat number	189	3.41	1.284	44	3.5	1.11	167	3.5	1.19	.501	2	.60

					2	0		4	6			7
Seat comfort	189	2.95	1.237	44	3.1	1.21	167	2.9	1.25	.555	2	.57
					4	2		2	3			4
Cleanliness of the cabin	189	3.47	1.253	44	3.4	1.10	167	3.4	1.22	.043	2	.95
					1	6		4	0			8
Reading materials	189	2.92	1.364	44	3.0	1.21	167	2.9	1.31	.165	2	.84
					5	9		3	5			8
Airline Magazine	189	2.99	1.227	44	3.1	1.24	167	3.0	1.35	.157	2	.85
					1	3		1	1			5
Inflight entertainment standards	189	2.39	1.307	44	2.8	1.24	167	2.5	1.35	2.06	2	.12
					2	4		6	2	8		8
Audio/ Movie programming	189	2.69	1.317	44	3.2	1.21	167	2.7	1.36	3.01	2	.05
					3	7		2	9	5		0
Meal choices	189	2.53	1.261	44	3.0	1.22	167	2.8	1.30	4.43	2	.01
					2	9		7	9	2		2
Food Quantity	189	2.49	1.270	44	2.9	1.09	167	2.8	1.32	5.26	2	.00
					5	9		9	6	1		6
Food Quality	189	2.66	1.342	44	3.0	1.17	167	2.9	1.33	2.81	2	.06
					9	8		2	3	5		1
Safety instructions	189	3.59	1.258	44	3.5	1.24	167	3.6	1.29	.028	2	.97
					9	5		2	2			2
Emergency services	189	3.56	1.293	44	3.4	1.08	167	3.4	1.28	.449	2	.63
					5	8		4	7			9
Sky sales	189	3.13	1.220	44	3.1	1.11	167	3.2	1.29	.123	2	.88
					6	9		0	1			4
Cabin ambience	189	3.18	1.237	44	3.2	1.16	167	3.2	1.19	.163	2	.85
					7	9		4	8			0

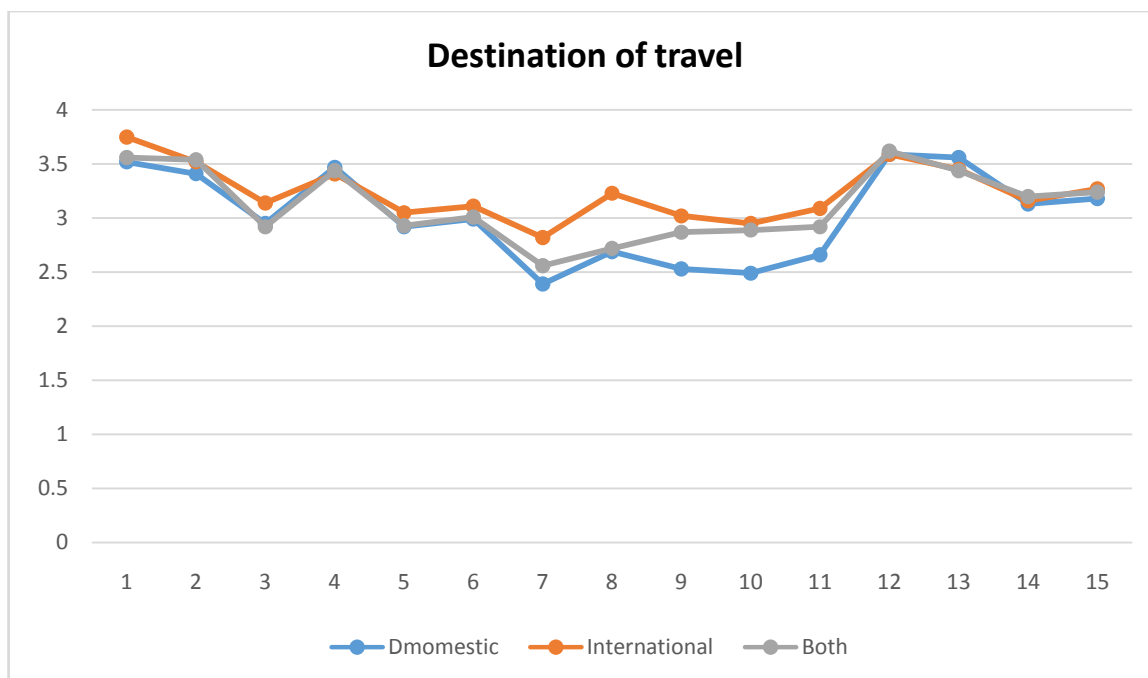


Figure 5: Satisfaction According to distance travelled

Passenger satisfaction according to the experience of travelling by other airlines

Results in table 8 and figure 6 classified and compared the satisfaction of passengers according to the experience of travelling by other airlines and no experience of travelling by other airlines. The results showed that the satisfaction level of the passengers who have travelled by other airlines is low for all the variables except for Behaviour of the crewmembers. The low satisfaction may be due to the comparison between the travelling experience by Saudi Airlines and the other airlines used. The ANOVA results are statistically significant except for the variables behaviour of the crewmember (.001), seat comfort (.003), cleanliness of the cabin (.010), reading materials (.006), airline magazine (.022), inflight entertainment (.006), audio/movie programming (.001), meal choices (.046), emergency services (.060), sky sales (.048), and cabin ambience (.034). There is difference of satisfaction among the passengers travelled by other airlines and not travelled by other airlines; however, the overall satisfaction level in both the groups were low as indicated by mean value 3 for all the variables and both the groups.

Table 8: ANOVA - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Travelled by other Airlines 'Yes'			Travelled by other Airlines 'No'			F	df	Sig.
	N	Me an	Std. Dev.	N	Me an	Std. Dev.			
Behaviour of crew member	270	3.4 3	1.154	130	3.8 3	1.079	11.05 3	1	.001
Seat number	270	3.4 4	1.217	130	3.5 5	1.252	.601	1	.439
Seat comfort	270	2.8 3	1.214	130	3.2 2	1.257	8.660	1	.003
Cleanliness of the cabin	270	3.3 4	1.196	130	3.6 8	1.246	6.746	1	.010
Reading materials	270	2.8 1	1.269	130	3.2 0	1.405	7.675	1	.006
Airline Magazine	270	2.9 1	1.279	130	3.2 2	1.259	5.275	1	.022
Inflight entertainment	270	2.3 8	1.246	130	2.7 7	1.439	7.668	1	.006
Audio/ Movie programming	270	2.6 2	1.281	130	3.0 7	1.399	10.22 2	1	.001
Meal choices	270	2.6 4	1.247	130	2.9 2	1.358	4.014	1	.046
Food Quantity	270	2.6 8	1.218	130	2.7 8	1.432	.517	1	.472
Food Quality	270	2.7 7	1.274	130	2.9 1	1.433	.991	1	.320
Safety instructions	270	3.5 8	1.249	130	3.6 6	1.309	.382	1	.537
Emergency services	270	3.4 1	1.275	130	3.6 7	1.241	3.553	1	.060
Sky sales	270	3.0 8	1.231	130	3.3 4	1.236	3.926	1	.048
Cabin ambience	270	3.1 3	1.185	130	3.4 0	1.249	4.532	1	.034

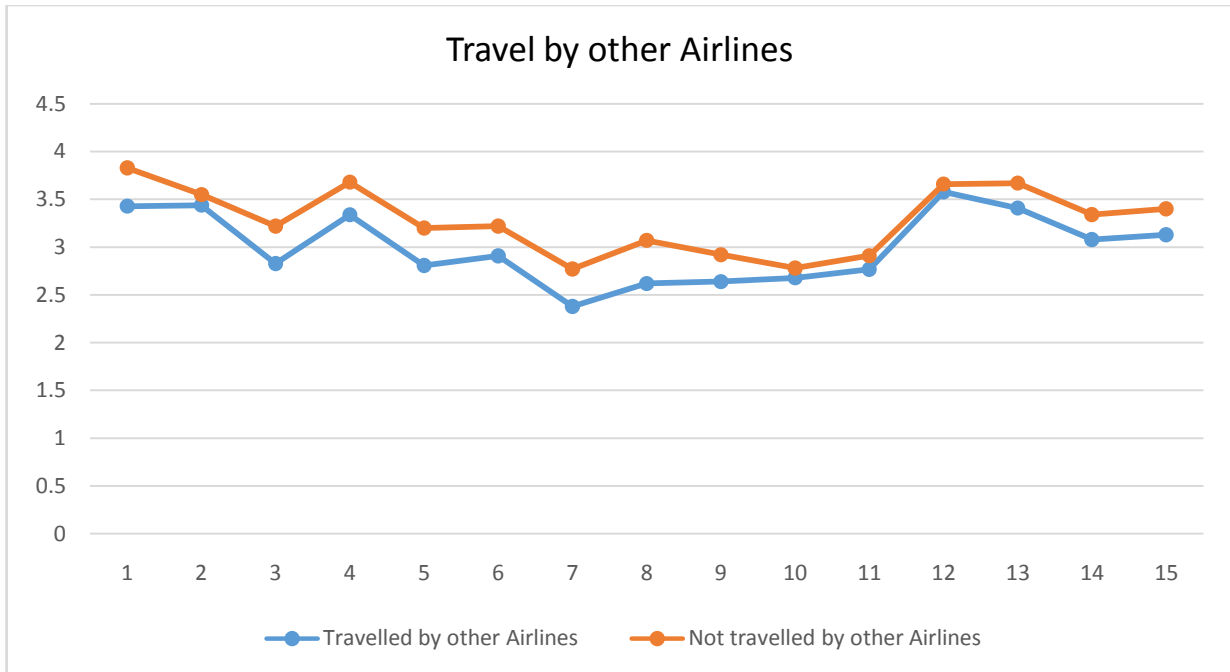


Figure 6: traveled by other airlines

Passenger satisfaction according to the membership in loyalty program (AlFursan Program)

Results in table 9 and figure 7 classified and compared the satisfaction of passengers according to the membership in loyalty program of Saudi Airlines called AlFursan. For analysis, the respondents are divided into two groups: first 'member of loyalty program AlFursan' and second 'not member of AlFursan program'. The satisfaction level of the Al Fursan members is low in comparison to the satisfaction level of those who were not members of the AlFursan. For all the variables, the satisfaction level of the AlFursan members in comparison to Non AlFursan members is low as shown in figure 6. However, they are very close to each other but the point is that the loyalty program of the Saudi airlines instead of enhancing the passenger satisfaction affecting is negatively, they are less satisfied than the non-members are. This may be because the members' expectations may have increased after taking the loyalty program members and the services of the Saudi airlines remained at the same level. The AlFursan members are not satisfied with 8 variables from 15 indicated by mean value less than 3 for the variables namely; seat comfort 2.86; reading materials 2.80; Airline magazine 2.96; Inflight entertainment 2.47; Audio/video programming 2.74; meal choices 2.68; food quantity 2.71; food quality 2.76. The non-members were not satisfied for the following five services only: Inflight entertainment 2.53; Audio/video programming 2.78; meal choices 2.77; food quantity 2.71; food quality 2.85. The overall satisfaction level in both the categories is low indicated by the mean value, which hovered around 3. The results are statistically not significant except for behaviour of the crew member (.082), cleanliness of the cabin (.20) and reading materials (.074).

Table9: ANOVA - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	Al Fursan Member			Not Al Fursan member			F	df	Sig.
	N	Mean	Std. dev.	N	Mean	Std. dev.			
Behaviour of crew member	169	3.44	1.243	231	3.65	1.061	3.033	1	.082
Seat number	169	3.45	1.253	231	3.50	1.212	.150	1	.699
Seat comfort	169	2.86	1.239	231	3.02	1.239	1.582	1	.209
Cleanliness of the cabin	169	3.28	1.259	231	3.57	1.181	5.467	1	.020
Reading materials	169	2.80	1.365	231	3.04	1.290	3.219	1	.074
Airline Magazine	169	2.96	1.336	231	3.05	1.238	.411	1	.522
Inflight entertainment	169	2.47	1.380	231	2.53	1.281	.194	1	.659
Audio/ Movie programming	169	2.74	1.373	231	2.78	1.311	.105	1	.746
Meal choices	169	2.68	1.320	231	2.77	1.267	.431	1	.512
Food Quantity	169	2.71	1.316	231	2.71	1.274	.000	1	.999
Food Quality	169	2.76	1.378	231	2.85	1.290	.504	1	.478
Safety instructions	169	3.56	1.362	231	3.64	1.197	.334	1	.564
Emergency services	169	3.46	1.345	231	3.52	1.212	.235	1	.628
Sky sales	169	3.18	1.246	231	3.15	1.233	.043	1	.836
Cabin ambience	169	3.12	1.226	231	3.28	1.199	1.645	1	.200

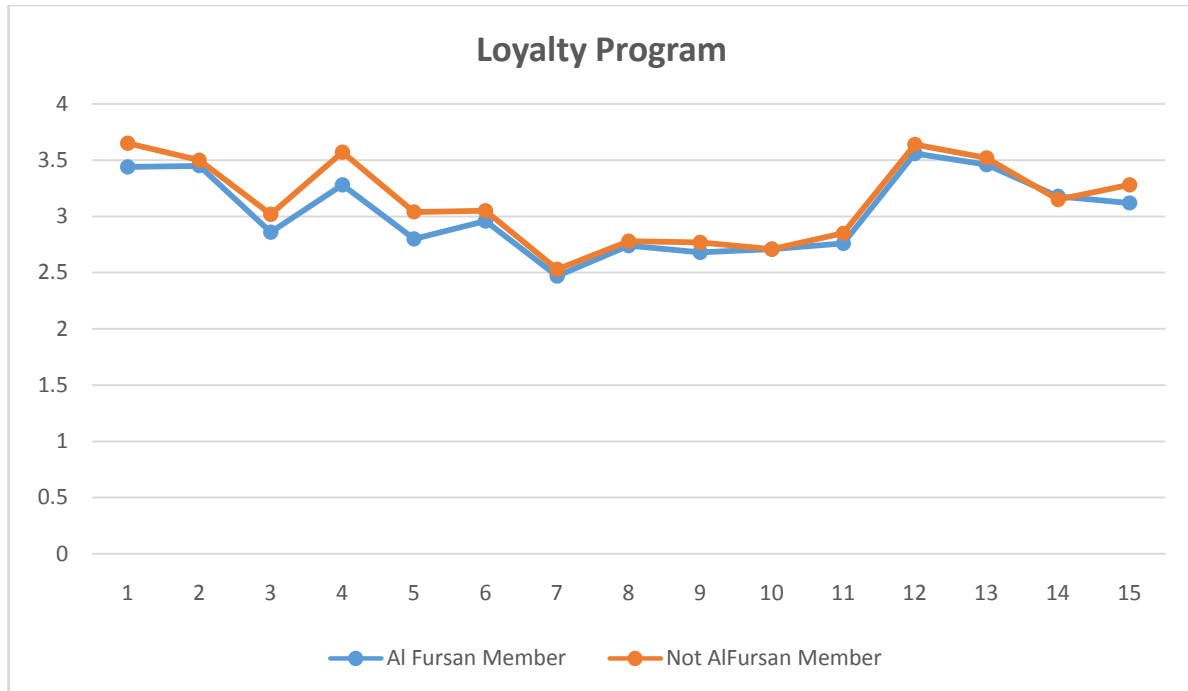


Figure 7: Satisfaction according to loyalty membership

DISCUSSIONS

The study undertaken with the main objective of empirically measuring the satisfaction of Saudi Airlines passenger from its onboard services and highlight the areas of improvement for the management of Saudi airlines. The results in table 10 presents the result and measures the significance of the results. Onboard services – inside the plane is the most important variable in measuring the overall satisfaction of airlines customers. Satisfaction from the onboard services in fact represents the actual service, which the passengers avail i.e., travelling from one destination to another. The passengers to the airline company directly associate this service to the airlines.

The results in table 10 present the mean values for individual variables of onboard services, their standard deviation, and t value to test the hypothesis. In all, there were 15 variables, which have been used to measure the onboard services of the airplane. From the fifteen variables, the mean value for eight variables is above 3 and seven variables mean value is less than 3. The mean value for the eight variables range from 3.01 to 3.61. The variables are namely safety instructions (3.61), Behaviour of crew members (3.56), Emergency services (3.50), Seat numbers (3.48), Cleanliness of the cabin (3.45), Cabin ambience (3.22), Sky sales (3.16), Airline magazine (3.01). However, to note that though the mean value for these variables are above 3, it is less than 4 indicating that the passengers are not satisfied with these services only somewhat satisfied. Given the results the following hypotheses H12, H1, H13, H2, H4, H15, H14, and H6 are partially accepted. The results for all the eight variables are significant at 95% confidence level except for airline magazine (.845). A close look to these services shows that these are the services, which the passengers do not directly use for the travel, but they are important. The other seven variables for which the mean value is less than 3 are directly consumed and looked for by the passengers. These variables are seat comfort (2.96), reading materials (2.94), Food quality (2.81), Audio/Movie programming ((2.77), Meal choices (2.73), Food quantity (2.71), In-flight entertainment standards (2.51). These services are consumed every time the passenger is (DOI: dx.doi.org/14.9831/1444-8939.2015/3-8/MRR.02)

travelling and would not like to compromise in it. These would immediately enhance the satisfaction or greatly cause the dissatisfaction. In the light of the results H3, H5, H11, H8, H9, H10, and H7 are rejected. The results are statistically significant for H11, H8, H9, H10 and H7, at 95% confidence level for the other two variables the results are not statistically significant.

The low satisfaction level of the Saudi Airlines passenger is a matter of concern, it needs attention and action plan from the management because satisfaction has a strong influence on customer (passenger) retention and business effectiveness of a firm (Kwong et al., 2009). After the industry is open to competition the passengers not satisfied will move to the competitors. Kim and Lee (2011) says customer satisfaction is a crucial factor of competitive advantage and helps to create the success for a company. Previous research showed that most airlines offers incentives such as frequent flyer programmes to build and maintain the customer loyalty (Miller and Hotz, 1993). Airline companies are attempted to differentiate their services (Lee and Cunningham, 1996) but the passengers did not perceive any difference from one carrier to another (Ott., 1993). Ostrowski et al., (1993) noted that when all airline companies have comparable fares and matching frequent flyer programs, the company with better-perceived service would draw passengers from other carriers. Thus, it is very important for the Saudi Airlines to enhance their service quality as most of the features offered by different airlines.

Table 10: One sample t test - Customer satisfaction on onboard services (inside the plane) of Saudi Airlines

Services	N	Mean	Std. Dev.	t	df	Sig. (2-tailed)
Safety instructions	400	3.61	1.268	9.542	399	.000
Behaviour crew member	400	3.56	1.144	9.787	399	.000
Emergency services	400	3.50	1.268	7.844	399	.000
Seat number	400	3.48	1.228	7.776	399	.000
Cleanliness of the cabin	400	3.45	1.221	7.370	399	.000
Cabin ambience	400	3.22	1.211	3.550	399	.000
Sky sales	400	3.16	1.237	2.628	399	.009
Airline Magazine	400	3.01	1.279	.195	399	.845
Seat comfort	400	2.96	1.240	-.726	399	.468
Reading materials	400	2.94	1.326	-.943	399	.346
Food Quality	400	2.81	1.327	-2.825	399	.005
Audio/ Movie programming	400	2.77	1.336	-3.519	399	.000
Meal choices	400	2.73	1.289	-4.190	399	.000
Food Quantity	400	2.71	1.290	-4.495	399	.000
In-flight entertainment standards	400	2.51	1.323	-7.447	399	.000

CONCLUSION

The main objective of the study was find out the satisfaction of Saudi passengers from its onboard services. The satisfaction of the passengers were analyzed along various independent variables such as nationality of the passengers, class of travel, duration of experience of travel, destination of travel, experience of travelling by other airlines, according to the membership in loyalty (DOI: [dx.doi.org/14.9831/1444-8939.2015/3-8/MRR.02](https://doi.org/10.1444-8939.2015/3-8/MRR.02))

program. The results in table 2 through table 9 showed in general that the passengers' satisfaction was low in general. In all the categories for all the variables the mean value hovered around three, in some cases just above three and in many cases below three. The mean value for none of the variables in any category was four or above four. Thus from the results it can safely be concluded that in general the Saudia passengers were only somewhat satisfied. From the results it can also be said that the passengers were neither highly dissatisfied. The management of Saudi needs an improvement plan for future as to enhance the passengers' satisfaction to retain the passengers from moving to the competitors.

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