



## **MEASURING THE SERVICE QUALITY OF AIRLINE SERVICES IN MALAYSIA**

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### **ABSTRACT**

The perception of Malaysian consumers of the quality of airline services was examined in this study using the SERVQUAL measurement. The results of the study indicate that the most significant factors in Malaysian customers' perception of service quality are Empathy, Tangibles and Assurance. In addition, the respondents indicated that the airlines surveyed performed better than expected on the Responsiveness dimension of service quality. There is also a strong indication that satisfaction with service quality results in future use and the likelihood of recommending the airline to others.

JEL classification: M19, Z13, M39

Key words: Perception, Service quality, Satisfaction

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## 1. INTRODUCTION

To remain competitive, service providers must render quality service to their customers. Past studies have attempted to measure customers' perception of service quality and the effect of customer satisfaction levels on their future behaviour, and various strategies for achieving customer satisfaction and customer loyalty have been suggested to companies from the findings of these studies. The gap-model of the SERVQUAL instrument (see Parasuraman, Zeithaml and Berry, 1991), that compares the perception of performance (P) to expectation (E), has been widely used in past studies in a variety of industries. This study attempts to replicate the SERVQUAL measurement of Parasuraman, Zeithaml, and Berry (1991) in determining the existence of 'service-gaps' in Malaysia's airline industry.

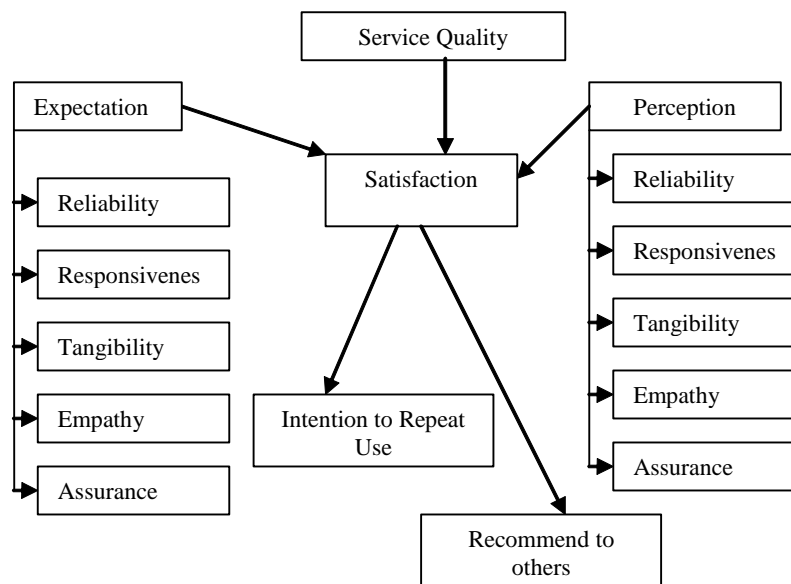
It was envisioned that the data collected would reflect the quality of services provided by the various airlines, assessing if whether their performance was on par with the expectations of their customers in terms of overall satisfaction and loyalty. The feedback from respondents provide guidelines for participating airlines in terms of strategies to improve their services and sustain loyalty among existing customers, as well as help in designing measures to attract new customers. From a consumer perspective, the findings uncover the values that consumers look for in the choice of airline services and other affecting factors. Sultan and Simpson (2000) and Cunningham, Young and Lee (2002) indicated that there are differences in the expectations of airline passengers in different parts of the world and among different nationalities. Hence, this study will also attempt to compare the travel behaviour and the perceptions and expectations of Malay and non-Malay consumers. Even though O'Connell and William (2005) conducted a study on the perceptions of low-cost airlines and full-service carriers in Malaysia, they did not examine the effect of ethnicity on expectations and perceptions of service quality.

### 1.1 THEORETICAL FRAMEWORK

Since the development of SERVQUAL by Parasuraman, Zeithaml, and Berry (1985), service quality has been widely researched and applied in different types of industries. SERVQUAL is a 'diagnostic

tool that uncovers a firm's broad weaknesses and strengths' in service quality (Hoffman and Bateson, 2006). The SERVQUAL model (performance minus expectation) focuses on the five 'gaps' affecting the delivery of excellent service quality. This study focuses on Gap 5: the difference between airline passenger expectations and perceptions of service.

FIGURE 1  
Theoretical Framework



The five dimensions of the SERVQUAL scale include (see Parasuraman, Zeithaml, and Berry, 1988):

- (a) The physical facilities, equipment, and the appearance of the staff (Tangibles);
- (b) The dependability and accuracy of the service provider (Reliability);
- (c) The ability to know and willingness to cater to customer needs (Responsiveness);
- (d) The ability of the staff to instill confidence and trust in the company (Assurance);

- (e) The ability of the staff to provide a caring service to customers (Empathy).

## 2. LITERATURE REVIEW

Since its development, SERVQUAL has been used to measure service quality in various service industries such as, appliance repair and maintenance, retail banks, long-distance telephone providers, securities brokers, and credit card companies (Parasuraman, Zeithaml and Berry, 1988); hospitals (Babakus and Mangold, 1989); CPA firms (Bojonc, 1991); physicians (Brown and Schwartz, 1989); dental school patient clinics, business school placement centers, tire stores, and acute care hospitals (Carmen, 1990); public recreation programs (Crompton and Mackay, 1989); real-estate brokers (Johnson, Dotson and Dunlop, 1988); higher education institutions (Galloway, 1998); retail apparel specialty stores (Gagliano and Hathcote, 1994); health clubs (Walker and Baker, 2000); and hospital services (Hwang, Eves and Desombre, 2003).

Cronin and Taylor (1992) concluded that 'the disconfirmation paradigm' was inappropriate for measuring perceived service quality and suggested SERVPERF as an alternative measure. However, there have also been suggestions that the 22 items of perception of service performance would be sufficient in measuring service quality (Carmen, 1990; Vandamme and Leunis, 1993). This study used SERVQUAL (performance minus expectation) measurements because it has been proven valid and reliable by previous studies. In addition, the performance minus expectation formula could be used in determining the service-gap and satisfaction level. This study also attempts to link satisfaction levels to future behaviour (the tendency to use the service again and to recommend it to friends).

### 2.1 THE IMPORTANCE OF SERVICE QUALITY IN AIRLINE SERVICES

Whether for business purposes, official duties or for holidays, passengers traveling on airlines expect certain levels of service quality, and this applies to specifically Malaysian air travelers as well. Consumers' overall impressions of service quality are linked to how efficiently an organization renders its services, and it is this impression that determines

customers' behavioral intentions to continuously patronize the airline or not. Good service quality helps organisations increase profits (Buzzell and Gale, 1987) and maintain their competitive advantage within their specific industry (Park, Robertson, and Wu, 2004). Since service quality and delivery are tangible, customers can make comparison between good and poor service providers. Thus, it is important for airlines to develop passenger-focused services by making an effort to understand passengers' expectations (Park, Robertson, and Wu, 2004). Airlines also need to be aware of differences in service expectations among airline passengers in different parts of the world and among different nationalities (Sultan and Simpson, 2000; Cunningham, Young and Lee, 2002).

## 2.2 CUSTOMER LOYALTY

Since airline companies are very concerned about customer loyalty, they need to review and reexamine their strategies not only to sustain customer loyalty but also to remain competitive. Natalisa and Subroto (2003) suggested that domestic airline operators need to honour promises made in their promotional and external communication materials. Continuous training activities should also be provided to frontline operators, in addition to developing various kinds of loyalty programs to ensure continued customer loyalty. Chin (2002) stated that an attractive frequent flier program (FFP) could actually contribute to increased loyalty from the repeat business of an increased number of customers. In addition, Dick and Basu (1994) suggested that reliability and confidence might encourage loyalty to the service provider.

Even though customer loyalty is very important to the survival of service companies, Gremler and Brown (1996) contend that this is an area that needs to be researched further. The result of customer loyalty can be depicted in customer behaviours such as repurchase intentions and purchasing sequence (Day, 1969) and attitudinal outcomes, such as recommending the service to others (Cronin and Taylor, 1992; Zeithaml, Parasuraman, and Berry, 1990; Selnes, 1993).

### 3. METHODOLOGY

The survey questionnaire consisted of nine sections of closed-ended questions on the following aspects: travel behaviour, expectations and perceptions of the services of the airline frequently used by the respondents, future purchase behaviour, overall quality of the services of the chosen airline, satisfaction level, and the likelihood of recommending the airline to others. The last section of the questionnaire focused on the background information about the respondents: gender, age, marital status, ethnic background, occupation, level of education and monthly income.

Questionnaires were distributed to a sample of 500 respondents who had traveled by air, conveniently selected in and around Kuala Lumpur, and at the KLIA airport by the enumerators. The respondents selected at the KLIA airport were those waiting for their flight. The enumerators were present to explain the questions and to ensure that all questions were answered correctly. A total of 391 sets of usable questionnaires were successfully collected yielding a response rate of 78 percent.

### 4. DATA ANALYSIS AND DISCUSSION

#### 4.1 TEST OF RELIABILITY AND VALIDITY OF THE DATA

To assess the dimensionality of the SERVQUAL scale, factor analysis was performed on the 22 items using the Principal Factor/Component (PF) method, followed by the Varimax rotation. Table 1 shows the results of the factor analysis test for SERVQUAL's variables. The Kaiser-Meyer-Olkin (KMO) value which is a measure of sampling adequacy, was found to be 0.867, suggesting that the factor analysis had proceeded correctly and that the sample was adequate. The results of the Bartlett's Test of Sphericity were also significant, which indicates that the factor analysis processes were correct and suitable for testing multidimensionality. All of the items loaded more than 0.50 which meet the requirement of a factor loading of 0.30 to be significant for a sample size of 350 or greater (Hair *et.al.*, 1998). Five factors were extracted which together accounted for 68.3 percent of the variance. The factors

were labeled as Reliability (Factor 1), Responsiveness (Factor 2), Empathy (Factor 3), Tangibility (Factor 4), and Assurance (Factor 5).

Cronbach's Alpha reliability test was used on the dimensions of perception and expectation to determine the reliability of the data. The

TABLE 1

Items	F1	F2	F3	F4	F5
Airlines provides service as promised	.862				
Airlines fulfills promise	.794				
Keeps accurate record	.721				
Airline is sympathetic & reassuring	.660				
Airline is dependable	.547				
Airline does not care about your interest		.823			
Employees do not know customers' needs		.774			
Employees do not give personal attention		.777			
Employees not willing to help customers		.763			
Employees too busy to respond to customers' request		.756			
Airline does not have convenient schedules		.731			
Airline does not gives individual attention		.738			
Customers do not receive prompt service		.718			
Airline does not inform customers time of service		.642			
Employees should get adequate support from airline			.829		
Employees should be polite			.830		
Physical facilities conform with service provided				.832	
Well dressed employees				.789	
Has appealing physical facilities				.819	
Has modern equipment and tech.				.789	
You can trust the employee					.821
You can feel safe in dealing with employees					.761

results in Table 2 showed that the Cronbach Alphas were all above 0.70, indicating acceptable reliability. Nunally and Ira (1994) suggested that a minimum of 0.70 would be an acceptable level. All of the items in perception were collapsed in order to get the aggregate mean score for each factor. On a scale from 1 (for strongly disagree) to 7 (for strongly agree), Empathy was found to have the highest mean score (mean 6.13), followed by Tangibles (mean 5.64), Assurance (mean 5.53), Reliability (mean 5.43) and Responsiveness (mean 3.70). The expectations of respondents were highest for Empathy (mean 6.40), followed by Reliability (mean 6.18), Tangibles (mean 5.96), Assurance (mean 5.88), and Responsiveness (mean 3.42). Table 3 reports the mean, the standard deviation, the difference between perception and expectation, and their p-value.

TABLE 2  
Cronbach's Alpha Reliability Tests Results

Dimension of Service Quality (Expectation)	Cronbach's Alpha	Dimension of Service Quality (Perception)	Cronbach's Alpha
Tangibles	0.8590	Tangibles	0.8824
Reliability	0.7952	Reliability	0.8552
Responsiveness	0.8735	Responsiveness	0.9031
Assurance	0.7347	Assurance	0.7793
Empathy	0.7749	Empathy	0.8440

TABLE 3  
Difference between Performance and Expectation  
Paired T-Test

Factors	Perception		Expectation		P - E	P-Value
	Mean	SD	Mean	SD		
Tangibles	5.64	1.03	5.96	0.98	-0.32	0.000
Reliability	5.43	0.97	6.18	0.84	-0.75	0.000
Responsiveness	3.70	1.21	3.42	1.31	0.28	0.000
Assurance	5.53	1.12	5.88	1.14	-0.36	0.000
Empathy	6.13	0.92	6.40	0.92	-0.27	0.000



#### 4.2. SAMPLE RESPONDENTS' CHARACTERISTICS

To depict the sample respondents' characteristics, descriptive statistics of frequencies and percentages were calculated. Table 4 reports the demographic profile of the respondents. The table demonstrates that more than half of the respondents were females (53.2 percent) while male respondents made up the rest (46.8 percent). A majority of the respondents belonged to the age group of 26 to 55 years old (73.1 percent) while the rest (26.9 percent) were either young adults of between 19 to 25 years old, or older people of 56 to 65 years and older. While more than half (54.7 percent) of the respondents were married, 43.0 percent were single and the rest were either divorced or widowed. Malay respondents were more prevalent among the respondents than those of other ethnic backgrounds. Working adults in the public and private sectors made up 71 percent of the sample, with 66.7 percent earning RM2,000 and above per month. Nearly two-thirds of the respondents (60.3 percent) had a university education.

#### 4.3 TRAVEL BEHAVIOUR OF RESPONDENTS

Table 5 reports the travel behaviour of the respondents. Data from the survey suggests that the respondents were not avid travelers since more than three-quarters of the respondents (83.1 percent) traveled only when necessary. The respondents traveled for a variety of reasons: for business or official duties (54.5 percent), going for holidays (59.1 percent) and attending to family or urgent matters (36.4 percent). Those who travelled for the purpose of study formed a minority of 8.7 percent only. The main reason respondents preferred to fly with certain airlines was familiarity with the respective airlines (47.1 percent), followed by the fact that the tickets were booked by others (41.7 percent) and the appeal of sales promotion campaigns run by the airlines (27.6 percent). Also important was the ability of the airlines to reach their destinations punctually (25.1 percent). Other reasons were that the airline was recommended by friends and relatives (16.9 percent) and that the tickets were cheaper than other airline (25.1 percent). More than half of the respondents (55 percent) had traveled with the same airline from 8 to more than 10 times. This could be due to their familiarity with the airline or the fact that the tickets were booked by someone else. For

those working in the public or private sector, the tickets were usually booked by their respective organisations, thus familiar airlines were usually booked. The booking of tickets was usually done through travel agencies/tour operators (56.5 percent), followed by booking through the internet (42.2 percent) and through telephone/call centers (33.0 percent).

Print advertisements seemed to be the main source of information about the services provided by the airlines (56 percent). This was followed by internet advertising (42.7 percent) and broadcast media (40.7 percent). Friends and relatives (combined) constituted 55.8 percent of the sources mentioned by the respondents. (The percentages exceed 100 percent because the respondents were asked to indicate more than one response to this question).

The findings suggest that customers rely more on impersonal sources (print, broadcast, and internet advertisements) than personal sources (friends and relatives). Therefore, airline companies should continue using these channels to attract new customers and to keep current customers updated on new services to be offered. As a major segment of the respondents (82.8 percent) are highly educated, messages could be targeted to this market segment.

TABLE 4  
Sample Respondents Characteristics

Items	Total ( <i>N</i> = 391)	
	Number	Percentage (%)
<i>Gender</i>		
Male	183	46.8
Female	208	53.2
<i>Age-Groups</i>		
19 – 25 years	89	22.8
26 – 35 years	125	32.0
36 – 45 years	94	24.0
46 – 55 years	67	17.1
56 – 65 years	15	3.8
More than 65 years	1	0.3
<i>Marital Status</i>		
Single	168	43.0
Married	214	54.7
Divorced	6	1.5
Widowed	3	0.8

TABLE 4 (continued)

Items	Total ( <i>N</i> = 391)	
	Number	Percentage (%)
<i>Ethnic Background</i>		
Malay	301	77.0
Chinese	43	11.0
Indian	26	6.6
Others	21	5.4
<i>Job Description</i>		
Public sector	149	38.2
Private sector	128	32.8
Nongovernmental sector	20	5.1
Student	48	12.3
Pensioner	10	2.6
Housewife	6	1.5
Others	30	7.7
<i>Highest Level of Education</i>		
	49	12.5
Form 5 / SPM / O – Level	19	4.9
Form 6 / STPM / A – Level	88	22.5
College / Diploma	235	60.3
University / Bachelors / Masters		
<i>Monthly Income</i>		
Less than RM 1000	63	16.3
RM 1001 – RM 2000	66	17.1
RM 2001 – RM 3000	77	19.9
RM 3001 – RM 4000	57	14.8
RM 4001 – RM 5000	34	8.8
RM 5001 – RM 6000	28	7.3
RM 6001 – RM 7000	23	6.0
RM 7001 – RM 8000	7	1.8
RM 8001 – RM 9000	6	1.6
RM 9001 – RM 10000	7	1.8
RM 10001 and above	18	4.7
Missing Values	5	1.3

TABLE 5  
Travel Behaviour of Respondents

Variables	N = 391
<i>Frequency of Travel/month</i>	
0-1 time	5.6
2-3 times	6.7
4-5 times	2.8
6 times or >	1.8
Not frequent	83.1
<i>Purpose of travel</i>	
Business/Official	54.5
Holiday	59.1
Family matters	21.1
Urgent matters	15.3
Study purposes	8.7
Others	3.8
<i>Destination</i>	
Domestic	69.6
South-East Asia	21.5
Europe	17.1
Middle-East	15.1
East Asia	14.1
West Asia	13.6
Australia	10.5
USA	9.5
Africa	8.4
<i>Airline Frequently Used</i>	
MAS	79.0
SIA	1.3
Thai International	16.6
AirAsia	2.6
Jet Airways	1.3
<i>Reasons for Choice</i>	
Appealing sales promotion	27.6
Reach destination fast	25.1
Familiarity	47.1
Recommendation	16.9
No alternative flights	3.3
Tickets booked by others	41.7
Cheaper tickets	25.1
Others	10.0

TABLE 5 (continued)

Variables	<i>N</i> = 391
<i>Usage of chosen airline</i>	
Once only	8.7
2-4 times	22.8
5-7 times	13.6
8-10 times	11.8
More than 10 times	43.2
<i>Method of booking</i>	
Telephone/call center	33.0
Travel agencies/tour operators	56.5
Shopping center	1.0
Internet/online	42.2
SMS	2.6
Post office	1.0
Others	13.3
<i>Sources of information</i>	
Print ads	56
Broadcast media	40.7
Internet ads	42.7
Friends	37.1
Relatives	18.7
Others	13.3

#### 4.4 TRAVEL BEHAVIOUR OF MALAYS AND NON-MALAYS

This section compares the travel behaviour of Malays (Muslims) and non-Malays to examine whether there are distinct differences, and this comparison is shown in Table 6.

##### a. Frequency of travel

Non-Malays travelled more often (six times or more per month), compared to Malays who are not frequent travelers, and only travel when necessary. However, the difference is not significant ( $p > 0.05$ ).

##### b. Purpose of travel

There was a significant difference in the purpose of travel between Malay and non-Malay respondents; the former traveled mainly for

business ( $\chi^2=68.737, p=0.0001$ ) or holiday purposes ( $\chi^2=76.576, p=0.0001$ ), while non-Malays indicated that they traveled for urgent ( $\chi^2=5.400, p=0.0001$ ) or family matters ( $\chi^2=12.488, p=0.0001$ ).

c. Destination

Malay respondents traveled to Middle-Eastern countries ( $\chi^2=28.492, p=0.0001$ ), while non-Malays traveled to the West ( $\chi^2=9.981, p=0.002$ ), East Asia ( $\chi^2=15.291, p=0.0001$ ) and Europe ( $\chi^2=16.254, p=0.0001$ ).

d. Airlines frequently used

Malay respondents preferred MAS ( $\chi^2=110.761, p=0.0001$ ) while non-Malays preferred Singapore Airlines ( $\chi^2=0.200, p=0.655$ ) and Thai International ( $\chi^2=0.333, p=0.564$ ).

e. Reasons for choice of airline

The prime reasons Malay respondents chose an airline included cheaper tickets ( $\chi^2=29.755, p=0.0001$ ) and the fact that the tickets were booked for them by someone else ( $\chi^2=50.804, p=0.0001$ ), while non-Malays chose an airline that enabled them to reach their destination ( $\chi^2=10.449, p=0.001$ ) and that offered an appealing sales promotion ( $\chi^2=17.926, p=0.0001$ ).

f. Usage of airline of choice

Compared to non-Malay respondents, who repeatedly flew their chosen airlines from two to seven times, Malay respondents indicated that they had flown only once in their chosen airline. However, this difference was not significant ( $\chi^2=5.658, p=0.226$ ).

g. Methods of booking tickets

There is a significant difference in the methods used by Malays and non-Malays in booking tickets. The booking of tickets through SMS was frequently done by Malays ( $\chi^2=6.400, p=0.011$ ), while non-Malays used the internet ( $\chi^2=25.606, p=0.0001$ ).

h. Sources of information

There is a significant difference between the sources of information used by Malays and non-Malays. The main sources of information

TABLE 6  
Travel Behaviour of Malays and non-Malays

Variables	Malays %	Non- Malays %	N	Chi-SQ Value	DF	P- Value
<i>Frequency of Travel/month</i>						
0-1 time	68.2	31.8	22	5.346	4	0.254
2-3 times	65.4	34.6	26			
4-5 times	72.7	27.3	11			
6 times or >	57.1	42.9	7			
Not frequent	79.0	21.0	324			
<i>Purpose of travel</i>						
Business/Official	78.4	21.6	213	68.737	1	0.000
Holiday	78.8	21.2	231	76.576	1	0.000
Family matters	69.5	30.5	82	12.488	1	0.000
Urgent matters	65.0	35.0	60	5.400	1	0.020
Study purposes	73.5	26.5	34	7.529	1	0.006
Others	53.3	46.7	15	0.067	1	0.796
<i>Destination</i>						
Domestic	75.7	24.3	272	72.059	1	0.000
South-East Asia	76.2	23.8	84	23.048	1	0.000
Europe	74.6	25.4	67	16.254	1	0.000
Middle-East	84.7	15.3	59	28.492	1	0.000
East Asia	76.4	23.6	55	15.291	1	0.000
West Asia	71.7	28.3	53	9.981	1	0.002
Australia	78.0	22.0	41	12.902	1	0.000
USA	75.7	24.3	37	9.757	1	0.002
Africa	75.8	24.2	33	8.758	1	0.003
<i>Airline Frequently Used</i>						
MAS	79.9	20.1	309	110.761	1	0.000
SIA	60.0	40.0	5	0.200	1	0.655
Thai International	33.3	66.7	3	0.333	1	0.564
AirAsia	66.2	33.8	65	6.785	1	0.009
Jet Airways	80.0	20.0	10	3.600	1	0.058

TABLE 6 (continued)

Variables	Malays %	Non- Malays %	N	Chi-SQ Value	DF	P- Value
<i>Reasons for Choice</i>						
Appealing sales promotion	70.4	29.6	108	17.926	1	0.000
Reach destination fast	66.3	33.7	98	10.449	1	0.001
Familiarity	77.2	22.8	184	54.348	1	0.000
Recommendation	77.3	22.7	66	19.636	1	0.000
No alternative flights	76.9	23.1	13	3.769	1	0.052
Tickets booked by others	77.9	22.1	163	50.804	1	0.000
Cheaper tickets	77.6	22.4	98	29.755	1	0.000
Others	76.9	23.1	39	11.308	1	0.001
<i>Method of booking</i>						
Telephone/call center	77.5	22.5	129	39.078	1	0.000
Travel agencies/tour operators	78.7	21.3	221	72.982	1	0.000
Shopping center	75.0	25.0	4	1.000	1	0.317
Internet/online	69.7	30.3	165	25.606	1	0.000
SMS	90.0	10.0	10	6.400	1	0.011
Post Office	75.0	25.0	4	1.000	1	0.317
Others	71.2	28.8	52	9.308	1	0.002
<i>Sources of information</i>						
Print ads	77.2	22.8	219	64.662	1	0.000
Broadcast media	78.6	21.4	159	52.082	1	0.000
Internet ads	76.0	24.0	167	45.323	1	0.000
Friends	75.9	24.1	145	38.793	1	0.000
Relatives	78.1	21.9	73	23.027	1	0.000
Others	88.5	11.5	52	30.769	1	0.000

for Malays were broadcast media ( $\chi^2=52.082$ ,  $p=0.0001$ ), print ads ( $\chi^2=64.662$ ,  $p=0.0001$ ) and relatives ( $\chi^2=23.027$ ,  $p=0.0001$ ), while the internet ( $\chi^2=45.323$ ,  $p=0.0001$ ), friends ( $\chi^2=38.793$ ,  $p=0.0001$ ) and advertisements were used by non-Malays.



#### 4.5 THE OVERALL PERCEPTIONS OF MALAYSIAN CONSUMERS ABOUT THE SERVICE QUALITY OF AIRLINE SERVICES

When respondents were asked to rate the quality of the services of airlines with a rating of 1 (for “very poor”) to 7 (for “excellent”), the results showed that more than three-quarters of the respondents (85.4 percent) evaluated the airlines service quality as “good” to “excellent”, while 11.8 percent were undecided and 2.9 percent gave a rating of “poor”. The mean of the service quality was 5.42.

The respondents also expressed their level of satisfaction with the services provided by the airlines with a mean rating of 5.43 (from a rating of 1 for “very unsatisfied” to 7 for “very satisfied”). Most of the respondents (85 percent) responded that they were satisfied with the service, while the rest were either undecided (11.5 percent) or unsatisfied (2.5 percent).

When the respondents were asked if they would use the airline in the future (a rating of 1 for “not at all” to 7 for “very frequently”), the answer was also positive (mean 5.23). The vast majority of the respondents (78.5 percent) were confident that they would travel with the airline again in the future. However, 15.6 percent claimed to be undecided, and a few (5.8 percent) indicated that they were not likely to fly the airline again. The result indicates that satisfied customers might become loyal customers to the respective airlines.

Lastly, the response to the question of whether the respondents would recommend the airline to friends (a rating of 1 for “not at all likely” to 7 for “very likely”), the response was also very encouraging to the airlines (mean 5.43). The results show that 83.2 percent of the sample would recommend the airline to others, while 13.0 percent were either undecided or indicated that it was unlikely that they would do so (3.9 percent). This implies that satisfied customers would not only become loyal customers, but would also recommend the airline to others.

Park, Robertson, and Wu (2004) suggested that consumers’ overall impression of the quality of the services provided by the airlines would determine continuous patronage. The findings of this study suggest

that the overall perception of the respondents was positive, and the likelihood of repeat usage should be encouraging to the airlines.

Regression analysis between satisfaction (independent variable) and future use (dependent variable) indicates a weak relationship, suggesting that satisfaction explains only 10.3 percent of the variance in future use of the airline ( $R^2 = 0.103$ ,  $p < 0.001$ ). This implies that even though the customers of the airline were satisfied with the service, it does not necessarily mean that they would fly with the same airline again. Regression analysis performed between satisfaction (independent variable) and tendency to recommend to friends (dependent variable)

TABLE 7  
Regression Analysis between Satisfaction and Future Use

Model	R	R-Square	Adjusted R-square	Standard Error of the Estimate
1	.321	.103	.101	.52570

Notes: Predictors: Constant, overall satisfaction with service  
Dependent Variable: Future use

#### ANOVA

Model	Sum of Squares	DF	Mean Square	F	Sig.
1 Regression	12.362	1	12.362	44.732	.000
Residual	107.505	389	.276		
Total	119.867	390			

#### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta		
1 (Constant)	1.613	.170		9.480	.000
Overall satisfaction with service	.398	.059	.321	6.688	.000

TABLE 8  
Regression Analysis between Satisfaction and Recommend

Model	R	R-Square	Adjusted R-square	Standard Error of the Estimate
1	.558	.312	.310	.40831

Notes: Predictors: Constant, overall satisfaction with service  
Dependent Variable: Recommend

## ANOVA

Model	Sum of Squares	DF	Mean Square	F	Sig.
1 Regression	29.366	1	29.366	176.141	.000
Residual	64.854	389	.167		
Total	94.220	390			

## Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta		
1 (Constant)	1.061	.132		8.028	.000
Overall satisfaction with service	.613	.046	.558	13.272	.000

indicated a weak relationship, suggesting that satisfaction explains only 31.2 percent of the variances in the recommendation ( $R^2 = 0.312$ ,  $p < 0.001$ ). Table 7 and 8 report the findings from the regression analysis.

#### 4.6 DETERMINATION OF 'GAP SCORES' BETWEEN PERCEPTION AND EXPECTATION

To determine whether Malaysian consumers perceive that the airlines performed their services as well as expected, the SERVQUAL measurement (P-E) was applied as a means of examining if 'gap

scores' for each of the dimensions existed between customer expectation and customer perception of service quality. The larger the gap, the further consumer perceptions are from expectations, and the lower the service quality evaluation. In contrast, the smaller the gap, the higher the service quality evaluation (Hoffman and Bateson, 2006). A paired t-test was used in comparing the means between the perception scores and expectation scores of the respondents.

As shown in Table 3 customer perception of airline service performance far exceeds their expectations in only one aspect, Responsiveness, while the rest of the service quality indicators showed a negative value. This suggests that the respondents were satisfied with the way the airlines served their needs and provided ample information.

An examination of the means of respondents perceptions based on the five dimensions of airline performance finds that Malaysian consumers gave the highest rating to Empathy (mean 6.13), followed by Tangibles (mean 5.64), Assurance (mean 5.53), Reliability (mean 5.43), and Responsiveness (mean 3.70). They also have high expectations for airlines to perform well in Empathy (mean 6.40), followed by Reliability (mean 6.18), Tangibles (mean 5.96), Assurance (mean 5.88), and Responsiveness (mean 1.31). Even though Malaysian consumers seem to have the lowest expectations and perceptions of the Responsiveness of the airlines' services, this is the only dimension that has a positive value ( $P > E$ ). The results also indicate a service-gap between customer expectations of airline services and their perceptions of the dimensions of service quality (except Responsiveness). The service-gap reflects customers' concerns about the ability of the airlines to provide reliable service, with empathy and the assurance that their safety and interests are given top priority.

In a similar study on airline companies conducted by Kim (1992), Reliability, Empathy, and Tangibles were found to have the most significant impact on customer perceptions of quality (see also Cunningham, Gerlach and Harper, 2004). Other findings include Lo, Cavana and Corbett (2002) who identified Assurance, Responsiveness and Empathy, with Assurance being the dominant predictor of the overall satisfaction level whereas Zeithaml, Parasuraman, and Berry (1990)

identified Reliability to be the most important and Tangibles as the least important of the five dimensions influencing the overall service quality rating of service companies. Sultan and Simpson's (2000) study of international airline passenger expectations and perceptions of service quality found Reliability to be the most important dimension, followed by Responsiveness, Assurance, Empathy, and Tangibles. Thus, our findings do not concur with those of Zeithaml, Parasuraman, and Berry (1990), Sultan and Simpson (2000) or Cunningham, Young and Lee (2002) in suggesting that Reliability is the most valued dimension in assessing service quality. Even though Reliability is important, it was found to be difficult to fulfill customer expectation in this area (Sultan and Simpson, 2000). Thus, the researchers have suggested that airlines devote more time to improving Reliability if they want to improve customer service quality.

Malaysian consumers, on the other hand, are very particular about airline employees being given enough support to be able to provide good service to customers and to treat customers in a polite manner (Empathy). The Tangibles, which comprise physical facilities, employee appearance and modernity of equipment and technology, also affect consumer perception. Airline companies need to ensure the safety of their consumers and to instill consumers' trust in their ability to perform good service (Assurance). Consumers also perceive that an airline should be Reliable in ensuring that airlines deliver what they promised, are dependable, sympathetic and reassuring to customers whenever there are problems (Reliability). Finally, airline companies need to train their employees to be Responsive to cater to the needs and interests of the customers promptly and keep customers informed of flight schedules, delays and any other important information (Responsiveness).

Several researchers have supported the argument that overall service quality is determined by perception only, rather than the difference between 'normative' expectation and performance. It was also pointed out that in normal circumstances, customers usually have high expectations (thus the higher mean as indicated in the table) and the likelihood of receiving a negative score for those items in the dimension is highly likely. The wording of the statements into negative statements could also have an influence on the scores. However, one benefit of comparing the perception and expectation is that, the variance

in the gap-scores could be determined and the airlines industry would be able to know which aspects of their services need to be improved.

#### 4.7 THE PERCEPTIONS OF SERVICE QUALITY BETWEEN MALAYS AND NON-MALAYS

Table 9 shows the comparison of perceptions between Malay and non-Malay respondents. It can be seen that Malay respondents expected airlines to provide services with Empathy and perceived airlines as able to fulfill this aspect as possessing service quality. The results also indicated that Malay respondents believed that the airline companies performed well in being Responsive to the needs of their customers ( $P>E$ ;  $p=0.001$ ). Similarly, non-Malay also considered Empathy as an important indicator of service quality and expected airline companies to provide their services with Empathy. Airlines were also considered as Responsive to the needs of customers ( $P>E$ ;  $p= 0.001$ ).

The findings suggest that, first, airline companies should develop strategies that address the concerns of both Malay and non-Malay customers. Secondly, since there is no difference between Malay and non-Malay customers in terms of their expectations and perceptions, there is no need to provide a differentiated marketing service strategy.

### 5. CONCLUSIONS AND IMPLICATIONS

Malaysian consumers were generally satisfied with the services provided by the airlines; however, the results of the SERVQUAL measurement indicate that performance exceeded expectations for all airlines surveyed in only one aspect: Responsiveness. The airlines still need to improve on the other aspects of Tangibles, Assurance, Reliability, and Empathy. Our findings suggest that customers consider Empathy as the most important indicator of their perception of service quality; therefore, proper training is required to ensure that this aspect of the service is delivered. There is a weak relationship between satisfaction and future use of the airline as well as with the likelihood of recommending to others. Thus, airline companies should look for strategies that turn satisfied customers into loyal customers. Factors that cause dissatisfaction among customers should be addressed in order to retain customers and to stay competitive in the airline industry.

TABLE 9  
Performance and Expectation between Ethnic Groups

Ethnic	Dimensions	Perception		Expectation		P-E	P-Value
		Mean	SD	Mean	SD		
Malays	Tangibles	5.64	0.96	5.96	0.95	-0.3206	0.000
	Reliability	5.42	0.95	6.19	0.84	-0.7648	0.000
	Responsiveness	3.65	1.25	3.42	1.30	0.2303	0.001
	Assurance	5.50	1.10	5.87	1.12	-0.3638	0.000
	Empathy	6.10	0.91	6.40	0.88	-0.3007	0.000
Non-Malays	Tangibles	5.66	1.23	5.95	1.08	-0.2972	0.023
	Reliability	5.46	1.07	6.17	0.87	-0.7111	0.000
	Responsiveness	3.87	1.05	3.42	1.22	0.4469	0.001
	Assurance	5.60	1.17	5.93	1.19	-0.3278	0.024
	Empathy	6.23	0.94	6.39	1.06	-0.1556	0.163

Since 71 percent of those traveling were working adults and more than half (54.5 percent) of these respondents travelled on business/official duties, the airlines should emphasize the provision of proper training to their staff on catering to the needs of these valued customers. Airlines should provide amenities and facilities that can be utilized during their flight, such as the use of computers and meeting spaces.

Reliability in terms of ensuring prompt services and on-time flights would instill the confidence in airline efficiency. Boone and Kurtz (2006) cited an example of a budget airline, JetBlue which was ranked first in quality among U.S. air carriers largely because it arrived punctually 86 percent of the time. The recent issue regarding airline service in Malaysia is the allegation that 11 percent of flights every month are late. In this regard, AirAsia ascertained that its flights were 88 percent on schedule and only 12 percent were delayed; whereas for MAS, 87 percent were on schedule and 13 percent delayed. Reasons given for the delays were shortage of runways, inefficient connectivity between the main terminal and the low-cost terminal, technical glitches, bad weather, air traffic control and aircraft rotation (New Straits Times, August 26, 2006). To be more transparent, it was suggested that the Ministry of Transport publish flight delay statistics for all airlines on a regular basis so that a benchmark could exist in terms of other international airlines. In this regard, management should ensure that enough support is given to facilitate the arrival and departure of the aircraft as scheduled. Price promotions are not sufficient to please airline customers, as not all customers are willing to accommodate unnecessary delays and uncertainties in their travel plans.

Even though the airlines surveyed have performed better than expected as far as Responsiveness is concerned, more can be done in informing customers exactly of flights schedules and of responding to customer complaints promptly. Customers have voiced their need for practical flight schedules so that they can make connecting flights. This is very important for airlines to address due to the large number of civil servants flying on official duties where arriving on time is of prime concern for them.

Both Malay and non-Malay respondents consider Empathy to be the most important indicator of the quality of airlines services; therefore this requires significant input from the airlines in ensuring that the expectations of customers are met by the performance of the airline



industry.

Business organisations should also show “*adil*”(justice) and “*ihsan*” (benevolence) in their dealings with customers, and should serve their customers and the society by providing services that are of acceptable quality and reliability. In serving customers, the goals of the airlines should not only be to make profits but also to fulfill the promises made to customers in their advertising messages. As far as MAS is concerned, being a national carrier of a Muslim country, serving many Muslims, the following verses from the Qurân that specify guidelines in conducting business could be pondered upon:

“O Children of Israel! Call the mind the (special) favour which I bestowed upon you, and fulfill your Covenant with Me as I fulfill My Covenant with you, and fear none but Me.” (Al-Baqarah: 40)

“And cover not truth with falsehood, nor conceal the Truth when ye know (what it is).” (Al-Baqarah: 42)

“O ye who believe! eat not up your property among yourselves in vanities: but let there be amongst you traffic and trade by mutual good-will: nor kill (or destroy) yourselves: for verily Allah hath been to you Most Merciful!” (An-Nisaa’: 29)

“O ye who believe! Fulfill (all) obligations.” (Al-Maaidah: 1)

In a similar study conducted on the service quality of hotels in Malaysia, it was found that Malaysian hotel guests had the lowest expectations and perceptions of service quality compared to other Asian and non-Asian countries (Pei, Akbar and Yong, 2006). Hotel guests from Malaysia and other Asian countries had high expectations on the Assurance dimensions, while those from non-Asian countries had highest expectations in term of the Responsiveness dimension. Tangibility had the lowest mean score. This implies that consumers have different expectations depending on the type of services provided.

Marketing communication should differ for different passenger groups. It can be seen that most of the respondents are highly educated and professional people working in a variety of fields. Thus, promotional campaigns that aim to inform, persuade, and remind the market through

effective use of mass media should be aggressively conducted. Different promotional strategies should be targeted towards different market segments, such as pensioners, students, and working professionals. (MAS has catered to the needs of the different segments by offering discounts on economy flights) More broadcast media should be used, as this is a common source of information for the respondents.

Alliances should be developed or maintained between Full-Service Carriers (FSC) and Low-Cost Carriers (LCC) to improve the air services to both local and international passengers in order to attract a larger market share. In this case, MAS should work closely with AirAsia so that they could better compete with foreign airlines. A recent proposal by the Tourism Minister for Tiger Airways, a Singaporean low-cost carrier, to be allowed to fly into Malaysia would facilitate not only more connectivity but also increase the influx of Singaporean tourists into the country (New Straits Times, August 26 2006).

Finally, the study results point out the key variables that determine customers' intentions to use the an airline again and the service-gaps that airline companies need to improve to develop and maintain long-term relationships with their customers. One key limitation of this study is that the scale requires more specific items related to airline services. This could be possible with in-depth interviews with customers prior to the development of the questionnaire. Due to the time limitation, this study could not involve more airlines that could have enabled a comparative analysis of service quality across several types of foreign and local airlines. Further studies are needed to examine the effects of other demographic factors, such as occupational group, income-level, and gender, on the perceptions and expectations of service quality in all types of service industries.

## REFERENCES

- Babakus, E., and W. G. Mangold. "Adapting the SERVQUAL Scale to Health Care Environment: An Empirical Assessment." In *AMA Proceedings*, edited by Paul Bloom. Chicago, IL: American Marketing Association, 1989.
- Bojonc, D. C. "Quality Measurement in Professional Services Firms." *Journal of Professional Services Marketing* 7, no.2 (1991): 27-36.

- Boone, L. and D. Kurtz. *Contemporary Marketing*. Thomson South-Western, 2006.
- Brown, S. W., and T. A. Swartz. "A Gap Analysis of Professional Service Quality." *Journal of Marketing* 53, (1989): 92-8.
- Buzzel, R. D., and B. T. Gale. "The PIMS Principles." *Free Press*, 1987. New York, NY.
- Carmen, J. M. "Consumers Perception of Service Quality: An Assessment of the SERVQUAL Dimensions." *Journal of Retailing* 66, no.1 (1990): 33-5.
- Chin, A. "Impact of Frequent Flyer Programs on the Demand for Air Travel." *Journal of Air Transportation* 7, no. 2 (2002): 53-86.
- Crompton, J. L., and K. J. McKay. "Users' Perceptions of the Relative Importance of Service Quality Dimensions in Selected Public Recreations Programs." *Leisure Sciences* 11, (1989): 367-75.
- Cronin Jr. J. and S.A. Taylor. "Measuring Service Quality: A Reexamination & Extension." *Journal of Marketing* 56 (1992): 55-68.
- Cunningham, L. F., J. Gerlach, and M. D. Harper. "Assessing Perceived Risk of Consumers in Internet Airline Reservations Services." *Journal of Air Transportation* 9, no.1 (2004): 21-35.
- Cunningham, L.F., C.E. Young, and M. Lee. "Cross-Cultural Perspectives of Service Quality and Risk in Transportation." *Journal of Air Transportation* 17, no. 1 (2002): 3-26.
- Day, G. S. "A Two Dimensional Concept of Brand Loyalty." *Journal of Advertising Research* 9, no. 3 (1969): 29-35.
- Dick, A.S., and K. Basu. "Customer Loyalty Toward an Integrated Conceptual Framework." *Journal of Academy of Marketing Science* 22, no. 2 (1994): 99-113.
- Gagliano, K. B., and J. Hathcote. "Customer Expectations and Perceptions of Service Quality in Retail Apparel Specialty Stores." *Journal of Service Marketing* 8, no.1 (1994): 60-9.
- Galloway, L. "Quality Perceptions of Internal and External Customers: A Case Study in Educational Administration." *TQM Magazine* 10, no. 1 (1998): 20-26.
- Gremler, D.D., and S. Brown. "Service Loyalty: Its Nature, Importance and Implications" In *Advancing Service Quality: A Global Perspective* edited by Edvardsson, B. International Service Quality Association, 1996.

- Hair, Jr., F. Joseph, Rolph E. Anderson, Ronald L. Tathan and William C. Block. *Multivariate Data Analysis*. New Jersey: Prentice Hall, 1998.
- Hoffman, K. D., and J. E. G. Bateson. *Services Marketing*. 3<sup>rd</sup> ed. Thompson Learning: Mason, O. H., 2006.
- Hwang, L. J. J., A. Eves, and T. Desombre. "Gap Analysis of Patient Meal Service Perceptions." *International Journal of Health Care Quality Assurance* 16, no.3 (2003): 140-53.
- Johnson, L.L., M.J. Dotson, and B.J. Dunlop. "Service Quality Determinants and Effectiveness in the Real Estate Brokerage Industry." *Journal of Real Estate Research* 3, (1988): 21-36.
- Lo, Y. L., R.Y. Cavana. and L. Corbett. "Quality and Customer Satisfaction in Passenger Rail Services: Developing Zones of Tolerance for Managing Quality." *IFSAM Conference, 2005*. [http://www.ifsam.org/2002/operationmgt/lo\\_cavana%20PUB.htm](http://www.ifsam.org/2002/operationmgt/lo_cavana%20PUB.htm)
- Llosa, S., J. L Chandran, and C. Orsingham. "Presentation, Criticism and Study of Scale Dimensionality. *Proceedings of the 3<sup>rd</sup> International Research Seminar in Service Management, Aix-on-Provence, IAE* (1994): 480-506.
- Lu, J. L and L. N. Tsai. "Modeling the Effect of Enlarged Seating Room on Passenger Preferences of Domestic Airlines in Taiwan." *Journal of Air Transportation* 9, no.2 (2004): 83-97.
- Natalisa, D. and B. Subroto. "Effects of Management Commitment on Service Quality to Increase Customer Satisfaction of Domestic Airlines in Indonesia." *Singapore Management Review* 25, no.1 (2003): 85-104.
- Nunnally, J. C. and Ira H. B. *Psychometric Theory*. New York: McGraw-Hill, 1994.
- O'Connell, J. F. and G. Williams. "Passengers' Perceptions of Low Cost Airlines & Full Service Carriers: A Case Study Involving Ryanair, Aer Lingus, Air Asia & Malaysia Airlines." *Journal of Air Transport Management* 11, no.4 (2005): 259-72.
- Parasuraman, A., V. A. Zeithaml, and L. L. Berry. "A Conceptual Model of Service Quality and its Implications for Future Research." *Journal of Marketing* 49, (1985): 41-50.
- Parasuraman, A., V.A. Zeithaml and L. L. Berry. "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality." *Journal of Retailing* 64, (1988): 12-40.

- Parasuraman, A., V. A. Zeithaml, and L. L. Berry. "Refinement and Reassessment of the SERVQUAL Scale." *Journal of Retailing* 69, (1991): 140-7.
- Park, J. W., R. Robertson, and C. L. Wu. "The Effect of Airline Service Quality on Passengers' Behavioral Intentions: A Korean Case Study." *Journal of Air Transport* 10, no.6 (2004): 435-9.
- Pei, M.L., A. K. Akbar, and G. F. Yong. "Measuring Service Quality and Customer Satisfaction of the Hotels in Malaysia: Malaysian, and Asian and Non-Asian Hotel Guests." *Journal of Hospitality and Tourism Management* 13, no.2 (2006):144-61.
- Selnes, F. "An Examination of the Effect of Product Performance on Brand Reputation, Satisfaction and Loyalty." *European Journal of Marketing* 27, (1993): 19-35.
- Sultan, F. and M. C. Simpson. "International Service Variants: Airline Passenger Expectations and Perceptions of Service Quality." *Journal of Services Marketing* 14, no.2/3 (2000): 188-216.
- Vandamme R. and J. Leunis. "Development of a Multiple Item Scale for Measuring Hospital Service Quality." *International Journal of Service Industry Management* 4, no.3 (1993): 30-49.
- Walker, J., and J. Baker. "An Exploratory Study of a Multi-expectation Framework for Service." *Journal of Service Marketing* 14, no. 5 (2000): 411-31.
- Zeithaml, V.A., A. Parasuraman, and L. L. Berry. "Delivering Quality Service: Balancing Customer Perceptions and Expectations." New York, NY. The Free Press, 1990.