

The effect of airline service quality on passengers' behavioural intentions: a Korean case study

Jin-Woo Park, Rodger Robertson*, Cheng-Lung Wu

Department of Aviation, University of New South Wales, Sydney, Australia

Abstract

This paper seeks to improving our understanding of air passengers' decision-making processes by testing a conceptual model that considers service expectation, service perception, service value, passenger satisfaction, airline image, and behavioural intentions simultaneously. For this testing, path analysis via maximum likelihood estimator is applied to data collected from Korean international air passengers. Service value, passenger satisfaction, and airline image are each found to have a direct effect on air passengers' decision-making processes.

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1. Introduction

Delivering high-quality service to passengers is essential for airlines survival. Service quality conditions influences a firm's competitive advantage by retaining customer patronage, and with this comes market share, and ultimately profitability (Morash and Ozment, 1994). The delivery of high-quality service becomes a marketing requirement as competitive pressures increase on air carriers (Ostrowski et al., 1993).

To deliver better service to passengers, airlines needed to understand passengers' need and expectations (Aksoy et al., 2003). Studies in other sectors suggest that customer satisfaction and service quality judgments involve consumers comparing their prior expectations to actual service performance. Where customer satisfaction and loyalty has been examined in the air transport context, factors such as service value and corporate image are tended to be ignored. Such omission, however could cause problems of model mis-specification and weak predictive power (Bagozzi, 1980; Cronin and Taylor, 1992).

To improve our understanding of air passengers' decision-making processes, a model that considers service expectation, service perception, service value,

passenger satisfaction, airline image, and behavioural intentions simultaneously is established.

2. Modelling air passengers' behavioural intentions

The key variables normally considered when modelling passengers' decision-making processes include service expectation, service perception, service value, passenger satisfaction, and airline image. Understanding what consumers expect from a service organization is important because expectations provide a standard of comparison against which consumers judge an organization's performance (Jin and Julie, 2000). Airlines need to understand what passengers expect from their services. To date, the effect of air passengers' expectations on service perception and passenger satisfaction has not been fully investigated, even though it is an important commercial consideration.

Service quality can be defined as a consumer's overall impression of the relative efficiency of the organization and its services. Customer satisfaction can be defined as a judgement made on the basis of a specific service encounter. The importance of the relationships between airline service quality, passenger satisfaction, and behavioural intentions have been examined by Ostrowski et al. (1993) and Sultan and Simpson (2000).

*Corresponding author.

E-mail address: r.robertson@unsw.edu.au (R. Robertson).

Although the direction of airline service quality and passenger satisfaction has been studied empirically, the causal order between airline service quality and passenger satisfaction, and the exact relationship between airline service quality, passenger satisfaction and behavioural intentions, is still a matter of debate because the direction may vary depending on context.

Value can be defined as a customer’s overall assessment of the utility of a product based on perceptions of what is received and what is given. Service value has been identified as an important variable of customer satisfaction and behavioural intentions (McDougall and Levesque, 2000). Even though studies have looked at service quality and value, the relationship between them still remains unclear. In spite of the importance of perceived service value as a form of assessment of services, there has also been only limited analysis of the exact nature of service value and its influence on customer behaviour (Nguyen and LeBlanc, 1998). Previous airline service studies have often ignored service value and few have investigated the effect of service value on passenger behaviour.

Corporate image can be defined as perceptions of an organization reflected in the associations held in consumer memory. Some studies have identified corporate image as an important factor in the overall evaluation of the service and the company (Gummesson and Gröonroos, 1988) but it remains unclear whether there is a direct relationship between image and customer behaviour or whether this relationship is mediated by satisfaction and perceived service quality (Bloemer et al., 1998). Corporate image can influence customers’ perception of services offered and customer’s choice of company (Andreassen and Lindestad, 1998). However, the role and the effect of corporate image in the airline industry have not been fully investigated.

The conceptual model (Fig. 1) is based on a review of previous work that has looked at service expectation,

Table 1
The hypotheses of relationships between model variables

H1: Service expectation has a positive impact on service perception.
H2: Service expectation has a negative effect on passenger satisfaction.
H3: Service expectation has a negative effect on service value.
H4: Service perception has a positive effect on passenger satisfaction.
H5: Service perception has a positive effect on service value.
H6: Service perception has a positive effect on airline image.
H7: Service value has a positive effect on passenger satisfaction.
H8: Service value has a positive effect on airline image.
H9: Service value has a positive effect on behavioural intentions.
H10: Passenger satisfaction has a positive effect on airline image.
H11: Passenger satisfaction has a positive effect on behavioural intentions.
H12: Airline image has a positive effect on behavioural intentions.

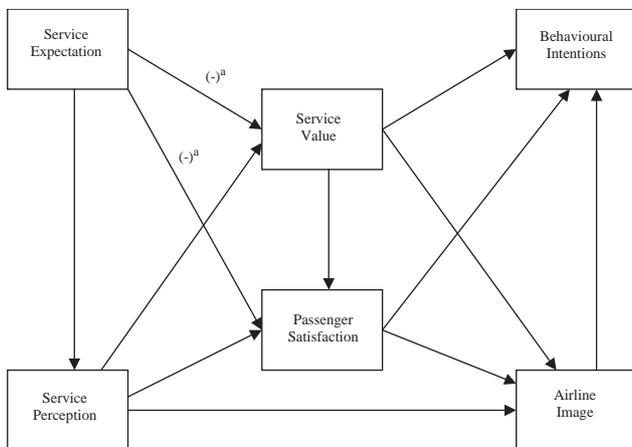
service perception, customer satisfaction, service value, and corporate image. The hypotheses to be tested empirically are seen in Table 1. The paths from service expectation to service value and to passenger satisfaction are hypothesized to be negative, while all the other paths are hypothesized to be positive.

3. Passenger survey

A number of Korean companies and communities including hotels, travel agencies, schools, and churches distributed the questionnaires used in this paper. A total of 850 questionnaires were distributed to Koreans who had undertaken at least one international flight in the previous 12 months. Some 650 completed questionnaires were collected, but 58 of them were incomplete, leaving 592 samples for data analysis. The passenger profiles are given in Table 2.

The design of the survey questionnaire is based on multiple-item measurement scales. The measurement items are adapted for an airline setting and all of the measurement items are based on a 7-point Likert-type scale. Airline service quality is measured by 22 airline service quality measurement items (Table 3) primarily based on the SERVQUAL scale developed by Parasuraman et al. (1988), together with insights gained from in-depth interview of airline managers and focus group responses. Service expectation and service perception are measured separately using the same 22 airline service quality measurement items. The mean value of service expectation measurement items is used for the service expectation measure and the mean value of 22 service perception measurement items is used for the service perception measure.

Service value, airline image, passenger satisfaction, and behavioural intentions are estimated using the mean values from the Likert-type scales of answers from the questions listed in Table 4. Basic statistics are presented in Table 5.



^a The hypothesized relationship is negative; the other causal paths are hypothesized to be positive

Fig. 1. The proposed conceptual model.

Table 2
Passenger profiles

Attributes/distribution	Sample number	Frequency (%)
<i>Gender</i>		
Male	329	55.6
Female	263	44.4
<i>Age</i>		
Less than 20	6	1.0
20–29	147	24.8
30–39	165	27.9
40–49	181	30.6
50–59	76	12.8
60 and over	15	2.5
Missing	2	0.3
<i>Occupation</i>		
Professional	52	8.8
Student	69	11.7
Management	24	4.1
Housewife	68	11.5
Employee of company	229	38.7
Government employee	93	15.7
Private business	34	5.7
Others	21	3.5
Missing	2	0.3
<i>Income</i>		
Less than 1,000,000 won ^a	14	2.4
1,000,000–2,000,000 won	92	15.5
2,000,000–3,000,000 won	138	23.3
3,000,000–4,000,000 won	120	20.3
4,000,000–5,000,000 won	120	20.3
More than 5,000,000 won	92	15.5
Missing	14	2.4

^aNote: 1167 Korean won is equivalent to \$1 USD (in February, 2004).

To evaluate reliability, internal consistency methods are widely used and Cronbach’s alpha is used to evaluate 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). The internal consistency of each measure is in fact more than 0.8 that implies a good level of reliability.

4. Results

Before testing the hypotheses, the goodness of fit of the proposed model is evaluated to ensure robustness. In structural equation modelling, to evaluate model fit using Chi-squared measures is not always straightforward because of sensitivity to sample size. A supplementary index is then used by dividing the Chi-square value by the number of degrees of freedom, which is defined by: $DF = a(a + 1)/2 - b$ where a is the number of observations and b is the number of parameters. In

Table 3
Airline service quality measurement items

Measures	Variables ^a
Service Quality	Up-to-date aircraft and in-flight facility
	Meal service (items, tastes, freshness, quantity, appearance, etc.)
	Seating comfort
	Seat space and Legroom
	In-flight entertainment services (e.g. books, newspapers, movies, magazines)
	Convenience of reservation and ticketing
	Promptness and accuracy of reservation and ticketing
	Frequent flyer program
	On-time performance
	Sincere interest in solving problems (flight cancellation, baggage loss, etc.)
	Safety record
	Check-in service (waiting time, efficiency, etc.)
	Promptness and accuracy of baggage deliver
	The amount imposed for overweight baggage
	Providing seat that passengers prefer
	Neat appearance of employee
	Employees who are willing to help passengers
Courtesy of employees	
Employees who have the knowledge to answer passengers’ questions	
Give passengers personal attention	
Convenient flight schedule	
Non-stop flight	

^aSeven-point Likert scale.

Table 4
Measurement items of value, image, satisfaction and behavioural intentions

Measures	Variables ^a
Service value	Considering the ticket price I pay for the airline, I believe that the airline offers sufficient services
	The ticket price of this airline is reasonable
	I have always had a good impression of this airline
Airline image	I believe that this airline has a better image than its competitors
	In my opinion, this airline has a good image in the minds of passengers
	Overall, how satisfied are you with the airline’s service quality?
Passenger satisfaction	My choice to use this airline was wise one
	I think that I did the right thing when I decided to use this airline
Behavioural intentions	Would you consider flying on this airline again in the future?
	Would you recommend this airline to other people?

^aSeven-point Likert scale.

this case we have three degrees of freedom. In general, if the ratio between the Chi-square goodness-of-fit measure and degrees of freedom is less than two, the model

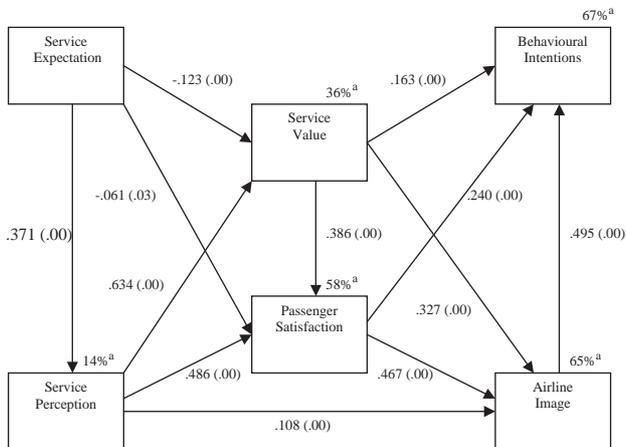
Table 5
Descriptive statistics of model variables

Variables	Mean ^a	Standard deviation
Service expectation	5.46	1.29
Service perception	4.80	1.21
Passenger satisfaction	4.83	1.08
Airline image	4.71	1.24
Service value	4.54	1.10
Behavioural intentions	4.67	1.25

^aMeasured on a seven-point Likert-type scale.

Table 6
Goodness-of-fit measures

Goodness-of-fit measure	Value
Chi-square value (χ^2)	5.677
Degrees of freedom (DF)	3
Chi-square value (χ^2)/ degrees of freedom (DF)	1.892
P-value	0.128
Goodness-of-fit index (GFI)	0.997
Adjusted goodness-of-fit index (AGFI)	0.978
Normed fit index (NFI)	0.997
Root mean square residual (RMR)	0.010
Root mean square error of approximation (RMSEA)	0.039



^aThe amount of variance explained

Fig. 2. Results of path analysis.

is accepted (Tabachnick and Fidell, 2001). To assess the fit of the model, we look at the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the root mean square residual (RMR), the normed fit index (NFI), and the root mean square error of approximation (RMSEA)—see Table 6. The various indexes indicate that the model provides an excellent fit to the data.

The results of the path analysis are seen in Fig. 2. The values on each path are the standardized regression weights with the values in parenthesis the corresponding P-values. The model explains 67% of variance in behavioural intentions and 65% of variance in airline

image. The model also explains 36% of variance in service value and 58% of variance in passenger satisfaction. In addition, service expectation explains 14% of variance in service perception. Thus, there a high level of explanatory power emerges.

As hypothesized, passengers' expectations are found to have a significant positive effect on service perception and are also found to have a significant negative effect on service value and passenger satisfaction. In other words, airline passengers are influenced by their expectations of airline service quality and service value. In addition, passenger satisfaction is also influenced by passengers' expectations.

Service perception has a positive influence on service value, passenger satisfaction, and airline image. This implies that passengers' perception of service quality is a key driver of passenger satisfaction, service value, and airline image. The analysis also shows that service perception has a positive influence on behavioural intentions through service value, passenger satisfaction, and airline image. This suggests that passengers' repurchase intention and their intentions to recommend the airline to others are influenced by airline service quality indirectly by means of service value, passenger satisfaction, and airline image.

Service value has a positive effect on passenger satisfaction, airline image, and behavioural intentions, implying that if passengers think they are getting high value from the services they receive, they are more likely to be satisfied, form a strong positive image of the airline, fly the airline again and recommend the airline to others. Passenger satisfaction has a positive influence on airline image and behavioural intentions, suggesting that satisfied passengers will form a favourable overall image of the airline, resulting in them travelling on the airline again and recommending the airline to others.

Airline image has a relatively high positive effect on behavioural intentions. This implies that passengers who form a positive overall impression of the image of the airline are more likely to fly the airline again and recommend the airline to others.

5. Conclusions

This paper has presented a model of service expectation. The analysis shows that service value, passenger satisfaction, and airline image are each found to have a direct effect on passengers' behavioural intentions. The results from a study of Korean travellers imply a need for airlines to develop passenger-focused services that require a detailed understanding of passengers' expectations. Meeting these expectations would raise the level of passenger satisfaction and value perception, and presumably commercial viability.

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