Journal of Air Transport Management 16 (2010) 226–228

Contents lists available at ScienceDirect

Journal of Air Transport Management

journal homepage: www.elsevier.com/locate/jairtraman

Note

# Factors influencing the intentions of passengers regarding full service and low cost carriers: A note

Yu-Chiun Chiou*, Yen-Heng Chen

*Institute of Traffic and Transportation, National Chiao Tung University, 4F, 118, Sec. 1, Chung-Hsiao W. Rd., Taipei 100, Taiwan*

*Keywords:*
Behavioral intentions
Low cost carriers
Full service carriers

A B S T R A C T

This study investigates discrepancy in factors affecting passengers' intensions regarding using full service and low cost carriers. A conceptual model, that originally focused on the former, is adopted and slightly revised according to the service properties of low cost carriers. To validate the revised model, a questionnaire survey on passengers of Spring Airlines, the first low cost airline in China, was conducted. The results indicate differences in attitudes towards full service and low cost carriers. Service perception is a latent variable with the most significant influence on intentions about using full service carriers, but exhibits less effect on intentions regarding low cost operators. Conversely, service value exerts the greatest effect on intentions for possible low cost passengers.



## 1. Introduction

The successful low cost air service business model developed by Southwest Airlines in the early 1970s in the US has since spread. Numerous low cost carriers (LCC) were established in the EU during the late 1990s to the early 2000s. During the mid 2000s, LCC business model entered the Asian market, first in Southeast Asia, and then in China and India. The past decade has seen numerous studies examining LCC, but most of these focused on the airlines in the US and EU market (O'Connell and Williams, 2005; Mason and Alamdari, 2007).

Because of the late introduction of this business model to China, few studies have focused on its market, which is one of the most rapidly growing air transport markets in the world and deserves careful examination. Based on this, Shon et al. (2008) employed importance-performance analysis (IPA) technique to analyze the gaps between customers' expectations and perceptions regarding the service provided by the first China LCC – Spring Airlines, and then improvement strategies are prioritized and recommended. However, the key factors affecting LCC passenger intentions are seldom investigated. To achieve an ever more successful LCC business model, in-depth insights into the air passenger decision-making processes are essential. Accordingly, this study aims to examine the relationships between service expectation, service perception, service value, passenger satisfaction, airline image, and behavioral intentions in LCC service context and compare the validated results with those of full service carriers (FSC) service.

## 2. Conceptual background

Structural equation modeling (SEM) is the standard method for simultaneously measuring latent factors and for examining several cause-effect relationships among these factors. Park et al. (2004) used SEM (Fig. 1) to explore passenger's intentions may be directly or indirectly affected by five key factors, including service expectation, service perception, service value, passenger satisfaction, and airline image.

Twelve hypotheses of cause–effect relationships among constructs are examined:

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 by 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 behavioral intentions.
H10: Passenger satisfaction has a positive effect on airline image.
H11: Passenger satisfaction has a positive effect on behavioral intentions.
H12: Airline image has a positive effect on behavioral intentions.

* Corresponding author. Tel.: +886 2 23494940; fax: +886 2 23494953.
*E-mail address:* ycchiou@mail.nctu.edu.tw (Y.-C. Chiou).

0969-6997/$ – see front matter © 2009 Elsevier Ltd. All rights reserved.
doi:10.1016/j.jairtraman.2009.11.005

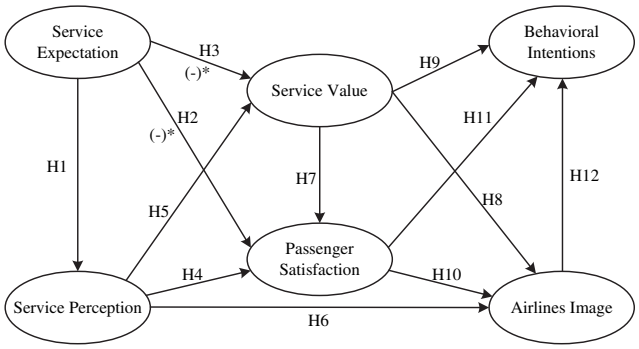


**Fig. 1.** The conceptual model proposed by Park et al. (2004). * The hypothesis is negative; the other causal paths are hypothesized to be positive.

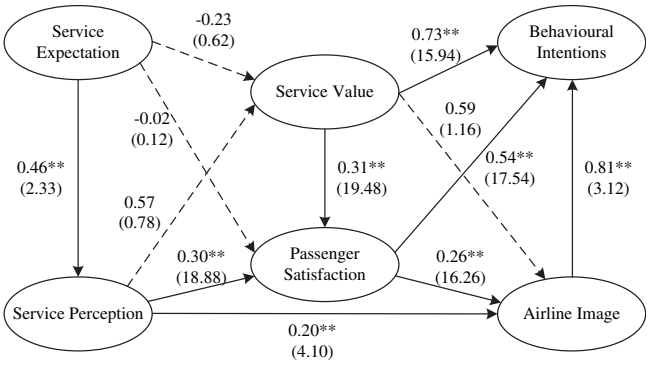


**Fig. 2.** Estimated structural model. *Denotes the significance level of $\alpha = 0.05$; *t*-values are given in parentheses.

Compared to FSC, LCC are airlines provide no-frills services at a comparatively low and simplified-regime fare. Target customers and behavioral intentions are believed to differ between FSC and LCC. Therefore, it is interesting to examine the applicability of the conceptual model proposed by Park et al. (2004) to LCC, and then to compare the difference between FSC and LCC. To this end, this study employs SEM to identify the key factors affecting behavioral intentions of Spring Airlines passengers based on the conceptual model. Discrepancies in contributing factors to behavioral intentions between FSC and LCC are then examined.

## 3. Data

A self-administered five-part questionnaire is used to collect data from LCC's passengers. The first part gathered passenger travel information. The second contained 21 statements reflecting dimensions of LCC service levels, primarily derived from the SERVQUAL scale developed by Parasuraman et al. (1988) and the of Park et al. (2004), together with insights gained from in-depth interviews with airline managers and focus group responses. Since the survey is focused on passengers of LCC, certain items are moderately revised from those of Park et al. to account for differences between FSC and LCC. Those questioned were asked to rate the degree of importance they ascribed to the statements using a five-point Likert scale in the third part. The pen-ultimate part of the questionnaire surveyed passenger perceptions of the aspects of service value, airline image, overall satisfaction and behavioral intentions, each of which were represented by two to three items. The final part asks for respondents' demographic information.

Two thousand questionnaires were disseminated to travelers flying Spring Airlines in airports and airplane cabins from March 5 to 11, 2007. Customers completed the questionnaires themselves before arriving at their destination airport, and 968 valid questionnaires were returned.[1]

## 4. Results

The structural model is tested using six constructs. By using a correlation matrix across 52 measurement variables, SEM analysis is performed against the proposed conceptual mode and the results indicate the structural model provides a good fit.

The overall model is tested, along with the relationships among the various constructs. The results, as depicted in Fig. 2, show that four hypotheses, H2, H3, H5 and H8, fail to be supported in the context of LCC, implying a discrepancy between FSC and LCC operations. Other hypotheses are validated, and the standardized regression coefficients have the same signs as those in Park et al. (2004). Compared to FSC passengers, service expectations of LCC passengers exhibit neither a significantly negative effect on service value nor a significantly positive effect on passenger satisfaction, suggesting that the service expectations of LCC passengers do not directly affect their assessments of service value and passenger satisfaction (H2 and H3).

Although LCC passengers still have high expectations regarding LCC service (because they tend to rate service attributes highly, as shown in Shon et al., 2008), service value and passenger satisfaction are not significantly affected. This may explain the rationale of passenger decision-making behavior, given their advance knowledge of the particulars of LCC and FSC services; their high expectations do not affect their decision-making. Additionally, service perceptions do not significantly affect service value (H5), making service value an exogenous latent variable in this framework. The final unsupported hypothesis is that service value does not significantly and positively affect airline image, implying that the airline image of an LCC is not created by increasing service value, for example by offering fare discounts, because the image of the LCC is already recognized as having a "low ticket fare". Thus strategy of further reducing ticket prices in this situation would not significantly improve corporate image.

**Table 1**
Direct, indirect and total effects among constructs of FSC and LCC.

| Path | FSC (Park et al., 2004) | | | LCC (This study) | | |
|---|---|---|---|---|---|---|
| | Direct effect | Indirect effect | Total effect | Direct effect | Indirect effect | Total effect |
| Expectation → Perception | 0.37 | – | 0.37 | 0.46 | – | 0.46 |
| Expectation → Satisfaction | −0.06 | 0.22 | 0.16 | – | 0.14 | 0.14 |
| Perception → Satisfaction | 0.49 | 0.25 | 0.74 | 0.30 | – | 0.30 |
| Service value → Satisfaction | 0.39 | – | 0.39 | 0.31 | – | 0.31 |
| Expectation → Service value | 0.39 | −0.12 | 0.23 | – | – | – |
| Perception → Service value | 0.39 | 0.63 | – | – | – | – |
| Expectation → Image | – | 0.04 | 0.04 | – | 0.13 | 0.13 |
| Perception → Image | 0.11 | 0.56 | 0.67 | 0.20 | 0.08 | 0.28 |
| Service value → Image | 0.33 | 0.18 | 0.51 | – | 0.08 | 0.08 |
| Satisfaction → Image | 0.47 | – | 0.47 | 0.26 | – | 0.26 |
| Expectation → Intentions | – | 0.17 | 0.17 | – | 0.17 | 0.17 |
| Perception → Intentions | – | 0.65 | 0.65 | – | 0.38 | 0.38 |
| Service value → Intentions | 0.16 | 0.35 | 0.51 | 0.73 | 0.24 | 0.97 |
| Satisfaction → Intentions | 0.24 | 0.24 | 0.48 | 0.54 | – | 0.54 |
| Image → Intentions | 0.50 | – | 0.50 | 0.81 | – | 0.81 |

[1] The Cronbach's αs of service expectation and service perception measured by 21 variables were as high as 0.882 and 0.889, respectively. Service value, airline image, passenger satisfaction and intentions, are measured by three variables with Cronbach's $\alpha = 0.717$, three variables with Cronbach's $\alpha = 0.848$, two variables with Cronbach's $\alpha = 0.800$ and two variables with Cronbach's $\alpha = 0.832$. The observed variables are found to be significant, and all constructs have high composite reliability.

Table 1 further compares the direct, indirect, and overall effects among constructs. According to Park et al's results relating to FSC, the most significant factors contributing to intentions is service perception, with an effect of 0.65, followed by service value, airline image and service satisfaction. Service expectation has the least total effect on behavior intentions, with a total effect of 0.17. We find that service value exerts the greatest influence on intentions, with an effect reaching 0.97, suggesting that increasing the value for money perceived by passengers will enhance intentions to choose and recommend the airline. The second most influential construct is airline image, with an effect of 0.81, which can be boosted by either increasing service perception, passenger satisfaction, or both. Also, the most influential construct of FSC, service perception, is the next to least important factor for LCC, indicating that the competitive advantage of a no-frills air transport service is its "cost leadership strategy" rather than "differentiation strategy". Coincidentally, the effects of service expectation on behavioral intentions of FSC and LCC share the same value of 0.17, making it the least important factor for both FSC and LCC.

## 5. Conclusions

A conceptual framework originally developed by Park et al. for studying traditional full service airlines is extended to low cost operations by studying the passengers of Spring Airlines, the first LCC in China. The analysis shows differences between the ways FSC and LCC are viewed by passengers. Service perception is the most significant influence on intentions of passengers to use FSC, but exhibits less effect on intentions to fly with LCC. Conversely, service value exerts the greatest effect on intentions for LCC, suggesting that the "cost leadership" (low-fare policy) strategy remains the top priority. To boost service perception without offering a comparatively low fare may not provide sufficient incentive to increase passenger numbers, because LCC customers already take it for granted that they will receive no-frills service before deciding to fly with Spring Airlines. Passengers are far more sensitive to price than service.

## Acknowledgements

The authors wish to thank two anonymous referees for their constructive comments to direct this study toward a more focused and insightful version.

## References

Mason, K.J., Alamdari, F., 2007. EU network carriers, low cost carriers and consumer behaviour: a Delphi study of future trends. Journal of Air Transport Management 13, 299–310.

O'Connell, J.F., Williams, G., 2005. Passengers' perceptions of low cost airlines and full service carriers: a case study involving Ryanair, Aer Lingus, AirAsia and Malaysia Airlines. Journal of Air Transport Management 11, 259–272.

Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1988. SERVQUAL: a multipleitem scale for measuring customer perceptions of service quality. Journal of Marketing 64, 12–40.

Park, J.W., Robertson, R., Wu, C.L., 2004. The effect of airline service quality on passengers' behavioural intentions: a Korean case study. Journal of Air Transport Management 10, 435–439.

Shon, J.Z., Chen, Y.H., Chiou, Y.C., 2008. Examining low cost carrier service quality in China market. 12th Air Transport Research Society World Conference, Athens, Greece.