

# **Cross-Strait Flights Service quality and Customer Satisfaction between Taiwan and the Mainland China**

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**Abstract:** *In a highly competitive circumstance like the cross-strait direct flight market between mainland China and Taiwan, how to provide high quality service to satisfy passengers is an important source of competitive advantage for airlines. This study is to examine customers' satisfaction with the services of the cross-strait flights between Kaohsiung and the mainland China. The empirical study was carried out in Kaohsiung International Airport. Individuals taking the cross-strait direct flight between Taiwan and mainland China were the target population. The respondents were selected through judgment sampling, which, in this case, involved the choice of passengers who were in the best position to provide the information required for the study. Participants were interviewed face-to-face. The results show that service quality has a direct impact on customer satisfaction. And there is a direct, positive relationship between customer satisfaction and brand loyalty. The followings are concluded according to the result of this research: 1. Service quality has positive influence on customer satisfaction. 2. Service quality has positive influence on customer's loyalty. The results show that service quality has a direct impact on customer satisfaction. And there is a direct, positive relationship between customer satisfaction and brand loyalty.*

**Keywords:** *Service quality, customer satisfaction, cross-strait flight, customer loyalty.*

## **I. Introduction**

Mainland China and Taiwan share similar cultures and language. However, direct transport linkages and trade across the Taiwan Strait was completely blocked since 1949 because of the civil war in China after World War II. When Taiwan government officially permitted residents of Taiwan to visit relatives and friends on the Mainland in November 1987, traffic between Taiwan and Mainland China has significantly increased. Most traffic between Taiwan and China depends on air transportation. Due to the political climate, only indirect air travel is allowed, with at least one mandatory stop over until 2008.

In 1991, the Taiwanese government published the Guidelines for National Unification with the aim to establish mutual trust and enhanced cooperation. It was hoped that both sides of the Strait could finally establish a mutually benign relationship by eliminating hostile attitude toward each other. On 15 August 2003, the Taiwanese government also announced the “Assessment of the Impact of Direct Cross-Strait Transportation” following President Chen Shui-bian’s proposal for the “Three phases of the cross-Strait direct transportation”. A timetable was proposed for the phases of preparation, negotiation and realization of direct transportation between both sides along the Strait (Chang et al., 2006). Between 2001 and 2008, the annual growth rate in trade between the two sides reached double digits. Total export and import volume surpassed 100 billion US dollars by 2008. Indeed, such development had accelerated the pace to direct transportation (Chiu, 2007; Lin & Chen, 2003).

Passengers have anticipated direct cross-strait flights for decades. With the change in the Taiwanese political climate, the Cross-Strait Air Transport Agreement was endorsed in 2008, and direct air connections between major mainland and Taiwanese cities were finally introduced again after more than half a century. The scheduled direct cross-strait flights between Taiwan and Mainland China is one of the most significant events in Taiwan-China relations in sixty years.

Service quality, passengers’ satisfaction, and loyalty are normally considered to be highly correlated, and the situation on the cross straits offers an opportunity to test this further. Additionally, given the international nature of the passengers involved, the relationship between national attitudes and service quality will be examined. Since airline is usually an international business, passengers who come from different countries/ areas may have different service quality perceptions and expectations toward the same airline. As such, providing reliable service quality to passengers having different cultural backgrounds and satisfying their desires are key issues of service management for international airlines. Excellent passenger satisfaction is one of the greatest assets for air businesses in today’s competitive environment, the on board experience is still something special for the passenger, if the passenger is not satisfied with the quality of service, they will reconsider the buying decision for further flights and will probably switch to another airline (Archana & Subha, 2012). Airline passengers can experience many service encounters with front-line employees as well as flight attendants, this is called “moment of truth”. Passengers may judge or evaluate airline service quality through a comparison between their experiences and expectations over a number of quality attributes (Grönroos, 2000) hence there is need to examine the influence of airline service quality on passenger satisfaction and loyalty because customer satisfaction holds a significant importance in corporate sector (Namukasa, 2013).

Here we examine differences in perceived service quality between cross-strait airlines from the viewpoints of Taiwanese and Mainland Chinese travelers and to analyze whether the effects of perceived service quality on passenger satisfaction vary between airlines. Following this introduction, section two introduces the literature related to customer satisfaction and service quality, leading to the development of the theoretical model. The research design and methodology is covered in third section followed by empirical results, and finally theoretical and managerial implications are discussed.

## **II. Literature Review**

The cross-strait direct flight between Taiwan and the mainland China market is a highly competitive environment, how to provide high quality service to satisfy passengers becomes a very significant segment of competitive advantage for airlines. As a perception, service quality has received much attention in the literature because of its sustainability as a source of competitive advantage. Service quality has been defined in different ways by researchers. Parasuraman et al. (1988) define service quality as “a function of the difference between service expected and customers’ perceptions of the actual service delivered’. They simplified their conceptual model into 22 items/five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Zeithaml et al. (1996) indicate that a better understanding of what customers expect has been the most crucial step in defining and delivering high service quality. Service quality is therefore an enduring construct that encompasses quality performance in all activities undertaken by management and employees (Prayag, 2007). Satisfaction is an immediate response to consumption, while service quality is interpreted as the overall impression of a customer's judgment concerning service provided (Culiberg, 2010).

Customers are the sole judges of service quality. If they perceive it to be bad service, then it is. They assess service quality by comparing what they want or expect with what they perceive they are getting. Airlines can benefit as well as achieving competitive advantage by doing their best to create and maintain service quality, which can lead to customer satisfaction. This in turn will grant various benefits to the airline by, for instance: (1) building strong relationships between the airline and its passengers, (2) providing a good basis for re-purchase activities, (3) encouraging passenger loyalty, (4) creating recommendations by word-of-mouth which will promote the airline, (5) creating a good corporate reputation in passengers' minds, and, finally, (6) by prompting an increase in the airline's profits (Park et al., 2005). Thus, airlines must realize that continuously upgrading quality is not costly in the long term, and it is an investment that will generate greater profits. Few airlines have been able over the years to establish a reputation of high service quality. This is because of rapid changes in the industry both in terms of changing needs of customers and definitions of what constitutes the industry itself (Rhoades et al., 1998).

SERVQUAL has been identified as a framework of service quality. The SEFVQUAL scale has been widely applied by both academics and practicing managers across industries in different countries. Parasuraman et al. (1985) propose 10 dimensions of service quality: tangibles, reliability, responsiveness, understanding the customers, access, communication, credibility, security, competence and courtesy. Later, Parasuraman et al. (1988) reduce the original 10 dimensions to five (tangibles, reliability, responsiveness, assurance and empathy), resulting in the widely used instrument known as SERVQUAL. Airline passengers may experience many service encounters with flight attendants, which may affected customer satisfaction. Grönroos (2000) figure out that passengers may judge or evaluate airline service quality through a comparison between their experiences and expectations, over several quality attributes. Since most services are intangible, most airlines find it difficult to understand how customers perceive their services. Therefore flight attendants should focus on tangibles by communicating to the customers the features of the service being provided.

Trip purpose, travel frequency, and cultural background may influence service quality perception. Sultan and Simpson (2000) investigated the service quality perceptions and expectations of European and US passengers for European and US airlines and found that passengers' nationality could be a critical factor influencing expectations and perceptions. Customer satisfaction is one of the best-studied areas in marketing, because it has become a principal factor in achieving organizational goals and is considered a baseline standard of performance and a possible standard of excellence for any organization (Hussain et al., 2015). Airlines recognize that keeping current customers is more profitable than acquiring new customers to replace those who have been lost. Since the intense competition in the airline industry, just satisfying customers is not sufficient. Somewhat, they should be extremely satisfied, which can initiate brand loyalty and better long-term relationships with customers who are then less prone to overtures from competition.

### **III. Research Design and Methodology**

Due to the competitive nature of the airline industry, corporate image plays a vital role in attracting passengers and distinguishing a company from other competitors, because the more reputable an airline is, the more trust it can build among its passengers. Various sources have indicated that corporate image is an important determinant of customer satisfaction and loyalty (Johnson et al., 2001; Wu, 2011). So, it is hypothesized that image has a positive impact on customer satisfaction.

H1. Corporate image has a positive impact on customer satisfaction.

Perceived value is a term used to compare services in two opposing dimensions; one side is the overall price, given the quality, and the other side is the overall quality, given the price (Woodruff, 1997). Perceived value acts as one of the core drivers for delivering the right products and services to the right customer at the right time. It also provides opportunities to compare organizations on the price-value ratio and is the fundamental basis for all marketing activity (Hussain et al., 2015). In addition, perceived value contributes directly to customer satisfaction, which in turn leads to behavioral intention. Therefore, it is hypothesized that perceived value has a positive impact on customer satisfaction.

H2. Perceived value has a positive impact on customer satisfaction.

Satisfaction is an immediate response to consumption, while service quality involves customers' judgments concerning the difference between the expected service and the perceived service. Service quality is the difference between customers' expectations and their perception of service. If performance is better than expected, then perceived quality is more than satisfactory, hence customer satisfaction occurs (Parasuraman et al., 1985). Hence, it is hypothesized that service quality has a positive impact on customer satisfaction.

H3. Service quality has a positive impact on customer satisfaction.

The survey instrument, a questionnaire, included all constructs of the proposed model to test the hypotheses. The questions are based on a review of the literature and specific service quality characteristics in aviation industry. The survey instrument was pre-tested, revised and finalized based on feedback from experts in aviation industry. Hence, the content validity of the survey instrument was deemed as adequate. A five-point

Likert scale was used to reduce the frustration level of respondents and increase response rate and quality as suggested by the previous researches, ranking from 1 “strongly disagree” to 5 “strongly agree”. The scales were hypothesized to have the five-dimensional structure used in the SERVQUAL model (Robledo, 2001). A pilot study was carried out to validate the survey instrument, which involved 30 passengers that had travelled cross-strait flights over the last 12 months. A structured questionnaire was used for data collection. The questionnaire was divided into five sections, the first section was about the demographic profile of respondents and second, third and fourth sections were designed to evaluate passengers’ overall experiences with the quality of services they had received from the airlines and the last was dealing with the effect of passenger satisfaction on passenger loyalty.

#### **IV. Empirical results**

Preferably to obtain an exact measure of the service quality offered by cross-strait airlines, one would have to administer the survey instrument on every flight to every destination. Such a large-scale distribution of questionnaires was unrealistic given budget constraints for this study. Inability to have access to a database of customers from passengers of cross-strait flights led to a non-probability sampling procedure being adopted. This study adopted convenience sampling. Sampling was done by interviewing randomly selected passengers, waiting for their flights at different times of the day, on every day of the week at Kaohsiung International Airport. From collecting the questionnaire data of the airline passengers, we attempt to investigate the relationships among service quality, perceived value, satisfaction and behavioral intention. The questions are based on a review of the literature and specific service quality characteristics in air transport. The empirical study was carried out in Kaohsiung International Airport. Individuals taking the cross-strait direct flight between Taiwan and mainland China were the target population. The respondents were selected through judgment sampling, which, in this case, involved the choice of passengers who were in the best position to provide the information required for the study. Face-to-face interviews of passengers waiting for their flights were conducted at Kaohsiung International Airport.

There are total 310 questionnaires that were distributed, a total of 303 questionnaires were complete and had valid responses, 7 questionnaires were incomplete hence they were removed. A total of 303 sets of usable questionnaires were successfully collected yielding a response rate of 97.8%. To reduce the refusals to participate or to answer specific questions, the researcher contacted passengers politely by explaining the purpose and contribution of the research.

Cronbach  $\alpha$  was used to test the internal consistency for all items under respective variables. Hair et al. (2006) suggested that Cronbach's  $\alpha$  coefficient over 0.6 is adequate for basic research. The reliability of each construct was assessed by using Cronbach's  $\alpha$  measure which in the experiment was ranging from 0.745 to 0.950, indicating that the scale are internally consistent and reasonably free of measurement error.

The respondents filled out seven categories of personal information, meaning that the market was segmented into nine different categories. The respondent profile is summarized as Table 1.

**Table 1 Summary Chart for Respondents Personal Information**

Respondents	Category	Number of Respondents	% of Respondents
Gender	Male	155	51%
	Female	148	49%
	Total	303	100%
Age	Ages 1-20	17	5.6%
	Ages 21-30	102	33.7%
	Ages 31-40	82	27.1%
	Ages 41-50	60	19.8%
	Ages 41-60	30	9.9%
	Age 60+ years	12	4%
	Total	303	100.00%
Education Level	High school	87	28.7%
	Undergrad Grad school	176	58.1%
	Post grad	40	13.2%
	Total	303	100.00%
Monthly Income (TWD)	0-30,000	137	45.2%
	30,001-60,000	90	29.7%
	60,001-90,000	43	14.2%
	90,001-120,000	14	4.6%
	12.,001-150,000	10	3.3%
	Above 150,000	9	3%
	Total	303	100%
Airlines	BR	83	27.4%
	B7	33	10.9%
	CI	87	28.7%
	AE	39	12.9%
	FE	14	4.6%
	MF	28	9.2%
	GE	7	2.3%
	Other	12	4%
	Total	303	100%
Seat Class	Economic Class	273	90.1%
	Business Class	27	8.9%
	First Class	3	1%

	Total	303	100%
Travel Purpose	Business	72	23.8%
	Leisure	186	61.4%
	Visiting Friends	9	3%
	Corporate Tour	19	6.3%
	Learning	11	3.6%
	other	6	2%%
	Total	303	100%

The hypotheses H1 through H3 were tested using Structural Equation Modeling (SEM) with latent variables. SEM has several strengths that made it appropriate for this study, including its ability to handle both reflective and formative constructs (Hussain et al., 2015). SEM analyses were performed using a covariance matrix as input to the Analysis of Moment Structure software package, using Maximum Likelihood Estimation. The results of the correlation analysis indicated that significant pair-wise relationships exist when the absolute correlation coefficient is equal to or greater than 0.126 at a significance level of 0.05. Also, reliability and factor conformity analyses were performed. The total variance observed ranged between 68.8% and 93.9%.

**Table 2 Summary of hypothesis results**

Hypothesis	Exogenous variable	Endogenous variable	Standardized estimate	Estimate	S.E,	t	P	Result
H1	Image	Satisfaction	0.346	0.340	0.086	3.944	0.000	Support
H2	Perceived value	Satisfaction	0.340	0.236	0.072	3.263	0.001	Support
H3	Service quality	Satisfaction	0.236	0.346	0.102	3.386	0.000	Support

In the proposed model, the data indicate that the path coefficients for the relationships between customer satisfaction and the three exogenous constructs were statistically significant (Image:  $\beta = 0.346$ ,  $P < 0.001$ ; Perceived Value:  $\beta = 0.340$ ,  $P = 0.001$  and Service Quality:  $\beta = 0.236$ ,  $P < 0.001$ ).

According to previous literature, corporate image is a promising marketing strategy for attracting new consumers, retaining existing customers and distinguishing a company from competitors. The result shows that corporate image has a significant relationship with customer satisfaction (H1). This is clear evidence that airlines should continuously keep and enhance their corporate image since it is basically the image that takes precedents in the customer minds.

According to Zeithaml (1988), perceived value is the consumer's overall evaluation of a product based on perceptions of what is received and what is given. This investigation has demonstrated that perceived value has a direct impact on customer satisfaction (H2).

When passenger receive good service quality from airlines, they perceive it as good value and are happy to pay a significant price because high quality leads to superior perceived value. The results show that service quality has a direct impact on customer satisfaction (H3). Therefore, the airline should make sure that they provide superior quality service to enhance customer satisfaction.

## **V. Conclusions**

This paper contributes to the understanding of customer satisfaction by determining the dimensions of airline service quality, which in sequence provides practical insights for airline managers into how to improve airline service quality. This research initiative examined exactly what goes to make up passenger satisfaction as well as how satisfied customers were with the services provided by the airline under consideration.

In the airline industry, passengers' perception of quality of service plays a key role in airline management, whether in Taiwan or mainland China. This study has examined the service quality of cross-strait airlines from the perspectives of travelers from both Taiwan and mainland China, and has discussed the differences in service quality, between airlines, and their effects on travelers' preferences. Through this analysis, the summaries of conclusions are list as following:

1. Corporate image has positive influence on customer satisfaction.
2. Perceived value has positive influence on customer satisfaction.
3. Service quality has positive influence on customer satisfaction.

The study results suggest that airlines should develop various strategies to improve service quality, for instance, meeting passengers' anticipated service levels, improving the quality of in-flight meals, solving service problems efficiently, developing convenient reservation and ticketing systems, making appropriate time schedules for passengers and reducing the effect of service failures as these directly affect passenger satisfaction and loyalty.

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