

Top purchase intention priorities of Vietnamese low cost carrier passengers: expectations and satisfaction

Massoud Moslehpour¹ · Wing-Keung Wong^{2,3,4} · Yi Hsin Lin⁵ ·
Thi Le Huyen Nguyen^{6,7}

Received: 4 December 2016 / Revised: 17 September 2017 / Accepted: 23 September 2017
© Eurasia Business and Economics Society 2017

Abstract This study investigates whether service quality, customer expectation, perceived value, and customer satisfaction have significantly positive impacts on purchase intention in the Vietnam's low cost carrier (LCC) industry. The mediating role of customer satisfaction is also examined. Some of our findings are consistent with the literature, related to both LCCs and full service industries, to confirm that customer expectations directly affect satisfaction. However, different from the literature related to full service industry, our results conclude no significant influences of perceived value and service quality on customer satisfaction and purchase intention, inferring that budget air's passengers purchasing is not due to its good service quality or perceived value, but because their expectations are met. Our findings also suggest that customer satisfaction can fully mediate the positive relationship between customer expectation and purchase intention. Purchase intention of air passengers could thus be explained through the pathway in which customer satisfaction plays the role of a mediating variable in the relationship between customer expectation and purchase intention. This study not only enriches the existing literature, but also provides a valuable assistance and guidance to LCCs for their strategic marketing plans and business improvement.

✉ Wing-Keung Wong
wong@asia.edu.tw

¹ Department of Business Administration, Asia University, Taichung, Taiwan

² Department of Finance and Big Data Research Center, Asia University, Taichung, Taiwan

³ Department of Economics and Finance, Hang Seng Management College, Hong Kong, China

⁴ Department of Economics, Lingnan University, Hong Kong, China

⁵ Department of Leisure and Recreation Management, Asia University, Taichung, Taiwan

⁶ Department of Management, Yuan Ze University, Taoyuan, Taiwan

⁷ Department of Business Administration, University of Finance and Accountancy, Quang Ngai, Vietnam

Keywords Purchase intention · Service quality · Perceived value · Customer expectation · Customer satisfaction · Low cost carrier

JEL Classification M31 · Z31 · M33

1 Introduction

Service industries are playing an increasingly important role in the economy of the world and the development of countries. Modern economies are driven by service businesses operating within industries. The low cost carrier (LCC) sector has had a significant influence on the aviation industry, tourist attractions and local economy (Graham 2014; Aydemir and Haytural 2016). LCCs serviced more than a billion passengers in 2016 (Euronews 2017). The LCCs are not a recent phenomenon, their origins date back to the 1970s. In the academic community, however, LCCs have been receiving wider attention in recent years. The spread of LCCs originally started in US, but soon found its way to Europe and Asia. In Asia, the LCCs share in 2015 accounts for 23% (ICAO 2017). Obtaining and maintaining customer satisfaction, therefore, becomes one of the biggest challenges to management in LCCs as a service industry (Kim and Lee 2011).

Providing high quality service is the key to gaining competitive advantages, while customer satisfaction has a positive influence on the profitability of a company. Kotler and Keller (2012) state that satisfaction is the feeling related to being happy or disappointed and that it is the result of comparing the perceived performance of a product or service with the expected service or product performance. In addition, satisfaction is known as an overall customer attitude towards a service provider (Hansemark and Albinson 2004). It has been suggested that consumer satisfaction is linked to perceived value. Perceived value can determine how much time or money customers are willing to pay for a product or service. It may have nothing to do with the true cost of the product. It, however, relates to the internal feeling which customers have about how valuable the product or service is to them or how much they are willing to pay for it. Moreover, expectations have been found to directly affect satisfaction (Reisig and Chandek 2001). Customers anticipate certain requirements when they use business services. By offering the highest level of service a business can recognize how to identify those expectations and meet them to the customers' satisfaction. In short, if an organization can meet the needs and satisfaction of its customers, increase the perceived value in the minds of the customers, and meet customer expectations; there will be a higher customer satisfaction in the product or service. Once customers have high satisfaction in an organization, their behavioral intention in terms of return purchase will be greater (Kim and Lee 2011).

Forbes (2008) indicates a significant correlation between consumer complaints and actual service quality. But, Forbes' analysis examines only network (traditional/legacy) carriers. Based on Forbes' results Wittman (2014) states that "expectations of service quality may be quite different for passengers of low cost carriers (LCCs)"

(p. 64) and that “a critical question for airlines is whether complaint rates or service quality failures affect a passenger’s choice to fly that airline...” (p. 70). Thus, the current study of VietJet Airlines builds a bridge over the gap in previous models leading to customer satisfaction and purchase intention in service areas (Cronin and Taylor 1992), and specifically based on the question posed by Forbes (2008) regarding LCCs.

The current population of Vietnam is 95,288,022 on May 16 2017 based on the latest United Nations estimates scattered across an area of 330,000 km², and therefore has a large potential market for domestic air travel (Moll-de-Alba 2016). In 2015, about 8 million foreign visitors travelled to Vietnam (Ministry of Culture, Sports and Tourism 2016). In addition to the international market, Vietnam’s domestic market also has a high potential because the surface transportation infrastructure in Vietnam is neither convenient nor competitive. It takes more than 30 h to travel by train from Ha Noi, the capital, to Ho Chi Minh City (the two largest economic hubs in Vietnam) and travelling by other means of surface transportation (Phang and Wong 1997; Govender 2016) also takes a long time and is very inconvenient. Meanwhile, it only takes about two hours to travel by airplane from Ha Noi to Ho Chi Minh City (CAAV 2012). Generally, the LCCs affect domestic routes substantially more than international routes (Aydemir and Haytural 2016). Currently, there are three main players in Vietnam that offer full service airlines and low-cost airlines including Vietnam Airlines, Jetstar Pacific Airlines, and VietJet Air. Among those, VietJet Air is the first private airline in Vietnam licensed to operate both domestic and international flights. Specially, VietJet Air has been established as the right choice for low-fare travelling to some of Vietnam’s most famous beach and holiday destinations. However, service quality of VietJet Air is still far behind international standards. It is very easy to find and receive complaints from customers about the airline’s services in Vietnam. Therefore, improving the service quality in the airline industry is an imperative task in order to meet customers’ satisfaction. So, how to improve the service quality of LCCs is the key question that this study aims at answering. Over time, many works have been done on the topics of LLCs service quality in the academic world but to the best of the authors’ knowledge, still few studies focus in LCCs in Vietnam, especially the mediating role of customer satisfaction seems to be ignored. For these reasons, this study attempts to examine factors influencing purchase intention in a low-cost airline in Vietnam applying to VietJet Air. Furthermore, the mediating role of customer satisfaction in the relationship between customer purchase intention and its effective factors is empirically investigated.

The intent of the current study is to investigate the influence of various factors on purchase intention and the mediating role of customer satisfaction in LCCs, specifically VietJet Air, in Vietnam. We also examine whether or not the findings from previous studies related to full service industry can be used in LCCs, and more specifically in Vietnam. Detailed discussion of our contribution to the literature will be discussed in the conclusion section. The results of this study can be used by the airline industry to improve its strategic marketing plans and can be used as a baseline for further research.

2 Theory and hypotheses

Many critical factors affect customer purchase intention in the airline industry. For example, Teng et al. (2007) figure out the determinants of purchase intention for different industries. The concepts of customer expectations, service quality, perceived value, and customer satisfaction have been used to explain customer purchase intention (Kotler and Keller 2012). This paper discusses the fundamental concept of these critical factors and applies these concepts to build up several research hypotheses. We first review the theory.

2.1 Theory background

2.1.1 *Service quality (SQ)*

Service quality is one of the most important factors because it benefits a company to boost its profits by gaining and retaining satisfied customers. In highly competitive business environments, customers use service quality to distinguish good organization from its competing organizations. It is imperative for service providers to provide higher levels of service quality (Soteriou and Zenios 1999). As a result of intangible, multifaceted nature of many services, it may be harder to evaluate service quality than goods, because customers cannot be separated from service delivery process. Thus, most scholars suggest that it is important to get major determinant to measure both customer satisfaction and customer loyalty. SQ is defined as the degree and path of inconsistency between customers' perceptions and expectations (Parasuraman et al. 1985).

Previous studies have identified service quality measurements and investigated the benefits of service quality. One of the emotional aspects of service quality is customer satisfaction (Howat and Assaker 2013). Expected and perceived services are the two main factors that affect the quality of services. Measures of SQ represent the gap between customers' hopes (before receiving the service) and opinions (after the services rendered). The smaller the gap, the better the quality of service and the greater the customer satisfaction (Zeithaml et al. 1996). If the received service is higher than expectations, then customers will be very satisfied and perceive the service quality to be very good, or even ideal.

2.1.2 *Customer expectation (CE)*

Customers' expectation about service is based on the differences between desired service and adequate service (Hsieh and Yuan 2010). Desired service is the degree of service that the customer anticipates to receive (Zeithaml et al. 1996). Customers are satisfied if the actual experience exceeds the expectation. If the path between experiences and expectations is not met, then they are disappointed. However, if the real experience exceeds their expectation, they are usually pleased. Different customers will have different expectations because different persons will have varying levels of knowledge about a product or service (Kumar et al. 2010).

Thus, everyone will think about the performance of a product or service differently and also estimate the performance in different ways. Customers' expectations are met when delivered services are matched with their characteristics, attitudes, and preferences (Mason and Simmons 2012). It is very dangerous when the service to be offered is found to be below what the organization promises. Also the customers will criticize the existing services if the organization requires an added value. As a result, their expectations will be raised (Cronin and Taylor 1992).

2.1.3 *Perceived value (PV)*

Perceived value of consumer is the difference between benefits and sacrifices and is the difference between service behavior and perceived service quality (Heskett and Sasser 2010). However, customer satisfaction is the difference between expected value and the actually provided value (Gummerus et al. 2011). Gummerus et al. (2011) categorize value research into two streams: creation process and outcome determination. The creation process refers to those elements involved in creating value (such as parties, activities, and resources) while the outcome determination summarizes several suggestions on how consumers determine and evaluate the end result of value creation. PV is the worth of a product or service that consumers have in their mind (Zeithaml 1988).

Recently, scholars voice their concerns about many traditionally perceived value measures that fit after-use evaluation and fail to include a more holistic view of perceived value (Helkkula et al. 2012). They suggest that value should be regarded as phenomenological, it emerges in a life-context with consumers' experience (Gummerus et al. 2011). The phenomenological perspective acknowledges that value perceptions extend beyond an individual context, such as purchase or usage situations. Both past and future experiences are incorporated in the value perceptions (Helkkula et al. 2012).

2.1.4 *Customer satisfaction (CS)*

Satisfaction echoes a person's rulings about the difference between the performance of a product or service and expected outcome performance (Kotler and Keller 2012). It is a key antecedent of many behavioral intentions such as repurchase intention and recommendation behaviour (Kotler and Keller 2012; Fornell 1992). The relationship between service quality and satisfaction has been investigated in, for example, banking (Soteriou and Zenios 1999), Internet banking (Ramseook-Munhurrin and Naidoo 2011), and airline industry (Grewal et al. 2010). Investigating customers of airlines, hotels and restaurants, Olorunniwo et al. (2006) conclude that the employees' level of knowledge is a key factor in satisfying the customers.

Customer satisfaction is a state of mind where the customers think that the product features are compatible with their personal expectations (Esmaeili et al. 2013). They point out that if the performance falls below (matches, exceeds) expectation, customers are dissatisfied (satisfied, delighted). Customer satisfaction is driven by a variety of latent factors including customer relationship, service

scape, human services, product quality, reliability, technology, commitment, empathy, and maintaining privacy (Miles and Shevlin 1998). Kotler and Keller (2012) explain that satisfaction is the feeling the consumer reaches when matching the path between perceived performance of a product or service with the anticipated product or service performance. In short, clients' happiness is the sign of whether customers are satisfied with the product or service, or not, and it is always the most essential element for any business.

2.1.5 Purchase intention (PI)

Purchase intention is the measure of consumers' probability of purchasing a product in a near future (Wu et al. 2011) and is the study of consumers' behavior related to attitude, perception, and buying behavior (Whitlark et al. 1993). It is also an individual's intention to buy a specific brand which has been chosen after certain evaluation. There are variables by which we can measure purchase intention of the brand for purchasing and expecting to purchase the brand in the future (Teng et al. 2007). Approaches toward a specific brand have a great effect on brand purchase intention (Brown and Stayman 1992). Tull and Hawkins (1987) define repeat purchase as the consumers' desire to buy the same brand product continuously.

In short, satisfaction is formed by customers from comparisons between their pre-purchase expectations of what they would receive from a product or service and what they actually receive. Furthermore, many researchers believe that CS has a strong influence on customer PI. This is the reason CS is considered as the mediator between independent variables (service quality, customer expectation) and the dependent variable (purchase intention) in our study.

2.2 Hypotheses development

The following sections illustrate and discuss the development of all hypotheses in our paper.

2.2.1 Hypothesis one

SQ is one of the most important issues in service literature (Parasuraman et al. 1985), while CS is one of the main areas of interest in marketing, business and the academic world (Bolton and Drew 1991). Many studies (Cronin and Taylor 1992; Mohtasham et al. 2017) have already shown relationship between SQ and CS and demonstrated the effect of SQ on CS. Since many studies have demonstrated that if the SQ increases (decreases), then customers will be (un-)satisfied, in this paper it is conjectured that SQ will influence CS in the airline industry as stated in the following hypothesis:

H1: service quality has significant positive influence on customer satisfaction

2.2.2 Hypothesis two

The relationship between CE and CS has been studied in some studies. Most researchers have argued that expectations directly affect satisfaction (Reisig and Chandek 2001). They agree that satisfaction is formed by the customers comparing their pre-purchase expectations based on what they would receive from a product or service with what they actually received (Oliver 2010). When customers expect something from a company but do not get what they expected, they feel dissatisfied. However, if their expectations are low and they are pleasingly surprised, they may feel satisfied. If their expectations are high, they may feel that they are let down (Reisig and Chandek 2001). Furthermore, disconfirmation theory proposes that the difference between expectations and perceived performance (disconfirmation) influence satisfaction (Pieters et al. 1995). Thus, it is conjectured that CE has a significant influence on CS in the airline industry as stated in the following hypothesis:

H2: customer expectation has significant positive impact on customer satisfaction

2.2.3 Hypothesis three

Cronin and Taylor (1992) show that CS is influenced by PV. Woodruff (1997) argues that PV is a result of the expectations of consumers, evaluation during the transaction, and post-purchase (after-use) assessment. CS is defined as an overall (positive or negative) feeling about the net value of services received. PV represents customer perception of the relational exchanges with the suppliers. Providing value to customers continuously and more effectively than competitors is the main objective of firms who want to acquire and retain satisfied customers (Schiffman and Kanuk 2004). Furthermore, PV is a suitable factor for measuring CS (Oliver 2010). Therefore, in this paper CS is hypothesized to be positively affected by PV in the airline industry as stated in the following hypothesis:

H3: perceived value has significant positive effect on customer satisfaction

2.2.4 Hypothesis four

Both SQ and PV are found to be direct antecedents of behavioral intentions (Dodds et al. 1991). Observing that perceived SQ is significant in predicting behavioral intentions, Baker and Crompton (2000) conclude that the relationship between SQ and PIs is positive, and thus, high SQ leads to high PIs while low SQ leads to low PI. Thus, in this paper PI is hypothesized to be positively affected by SQ in the airline industry as stated in the following hypothesis:

H4: service quality has significant positive influence on purchase intention

2.2.5 Hypothesis five

CE is among one of the important elements to predict customer purchase intention. Particularly, CE tends to increase when an organization can provide an added value service. Therefore, expectations obviously serve the reference point in customers' assessment toward a service performance (Cronin and Taylor 1992). In this study, CE is considered the confidence of a consumer before buying a service (Olson and Dover 1976). Good expectation in mind was hypothesized to affect CS in the previous section. Finally, this factor affects the intention to be a customer. Thus, in this study CE is hypothesized to generate a strong effect on customer PI.

H5: customer expectation has significant positive influence on purchase intention

2.2.6 Hypothesis six

It is found that customer PV is a major contributor of PI. Lee and Lin (2005) note that both PV and CS significantly influence customer retention, market share, and profitability. Moreover, the model of price, quality and PV has suggested that PV is an important factor in consumers' purchasing decision. Consumers rather buy a product with high PV (Dodds et al. 1991). Consumer PI is derived from consumers' perceptions of benefits and values acquisition, and is an important factor in predicting consumer purchase behavior. The higher is the PV, the higher is the PI (Monroe and Krishnan 1985). Thus, PI is hypothesized to be influenced by PV.

H6: perceived value has significant positive effect on purchase intention

2.2.7 Hypothesis seven

Taylor and Baker (1994) suggest that satisfaction should be described as a moderator between SQ and PI. Woodside et al. (1989) believe that CS is a cause of customer PI. CS is known to be one of the most important issues for success in today's highly competitive business environment, as it affects customer retention (Ooi et al. 2011). Thus, CS has a significant influence on customer PI. The following hypothesis is made to extend the study to airline industry:

H7: Customer satisfaction has a significant impact on purchase intention

2.2.8 Hypothesis eight: mediation

Is there any indirect pathway among SQ, CE, PV, CS and PI? Oliver (1980) concludes that satisfaction appears to mediate changes between pre-exposure and post-exposure attitudinal components. Cronin and Taylor (1992) and others explore the mediating role of CS whereby SQ, PV and CE affect PI. These works focus on industries like tourism or hotel service but so far there is no study on the relationship among SQ, CE, PV, CS and PI in the airline industry. Therefore, the following three

sub-hypotheses with the aim to explore the influence of SQ, CE, and PV on PI through pathways of CS in the airline industry are proposed in our study:

H8a: customer satisfaction mediates the influence of service quality on purchase intention

H8b: customer satisfaction mediates the impact of customer expectation on purchase intention

H8c: customer satisfaction mediates the effect of perceived value on purchase intention

3 Instrument, data and methodology

3.1 Instrument development

A Survey questionnaire was compiled to test the research model as stated in Sect. 3.3.2 for the mediating role of customer satisfaction. The questionnaire compilation is adopted from several sources based on literature review. After initial collection of the survey items five experts were asked to comment on the appropriateness of the questionnaire, research constructs, and research model. Based on the valuation from the experts, repetitive and vague items were eliminated. The SQ questions are adopted from Baker and Crompton (2000) and Grewal et al. (2010); CE items are adopted from Cronin and Taylor (1992) and Chitnis (2006); PV items are adopted from Chen and Dubinsky (2003); CS items are adopted from Chitnis (2006); and PI items are adopted from Baker and Crompton (2000), and others.

3.2 Data collection and sample demographics

The population for this research is air passengers from three regions of Vietnam: Ha Noi (representative of the North), Quang Ngai province (representative of the Central) and Ho Chi Minh City (the biggest city and representative of the South). The sample is collected via online questionnaire distributed through email and several social and travel networking media using simple random sampling (Hansen et al. 1953). 379 usable responses are collected for data analysis.

The respondents identified themselves according to their gender, age, occupation, marital status and area distribution. The demographic results of the respondents are: 186 (49.1%) male and 193 (50.1%) female, 43% of respondents in the age range from 23 to 30 years old, 212 respondents (55.9%) had a bachelor's degree, 171 respondents (45.1%) are employees. Respondent are from the Center (48.8%), following by the north (29.6%) and the south (21.6%).



Fig. 1 Research framework

3.3 Methodology

3.3.1 Data analysis techniques and testing for mediation effect

Structural equation modeling (SEM), allows the concurrent estimation of multiple multivariate equations; comprising of multiple regression analysis, path model analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), mediation analysis, validity, and reliability estimates of the hypothesized structural model (Hair et al. 2009) are performed by using both SPSS 20 and AMOS 20.

Mediation is a causal chain in which the independent variable (IV) influences a mediating variable (MV) that affects the dependent variable (DV) (Baron and Kenny 1986). Bootstrapping, a more prevalent method of testing the indirect effect (Bollen and Stine 1990) is a non-parametric resampling of data. On the basis of the assumed causal relationships of different factors and mediator and their potential impacts on purchase intention (PI) in the airline industry, structural equation modeling is employed.

3.3.2 The model

Eight hypotheses are constructed to express the direct and indirect relationships between the research critical factors. These direct and indirect pathways (Liao and Wong 2008) can be combined to obtain the model as shown in Fig. 1.

4 Results

4.1 Reliability and validity test

EFA (Tull and Hawkins 1987) is conducted to identify the variables; PI (dependent variable), SQ, CE, PV (independent variables), and CS (mediating variable). Principal Component Analysis is used for the extraction method while the Varimax

rotation method is used to minimize the number of variables that have the highest factor loadings on a factor. Items with factor loadings smaller than 0.5 were eliminated (Hair et al. 2009). Table 1 summarizes all items factor loadings (EFA and CFA), reliability and validity measures for each variable as well as the whole instrument. The model is appropriate to the data because the KMO (0.871) is greater than 0.6 (Moslehpour et al. 2014). All values of Cronbach's α are highly reliable (Tull and Hawkins 1987), implying our proposed model in Table 1 is appropriate to the sample and the instrument of the model is reliable.

Calculating CFA as a part of SEM requires establishing convergent and discriminant validity as well as reliability of the instrument. Convergent validity and discriminant validity are used to evaluate construct validity. Convergent validity

Table 1 Factor Analysis, Instrument Validity and Reliability

Variables	Items ^a	<i>M</i>	SD	% of variance	Loadings		Cronbach's α
					EFA	CFA	
Service quality (SQ)	SQ1	3.59	1.051	13.550	0.816	0.677	0.750
	SQ2	3.82	1.095		0.819	0.757	
	SQ3	3.91	1.084		0.784	0.687	
Customer expectation (CE)	CE1	3.73	0.833	14.487	0.764	0.761	0.778
	CE2	3.78	0.827		0.768	0.702	
	CE3	3.73	0.794		0.704	0.742	
Perceived value (PV)	PV1	3.69	1.065	14.343	0.886	0.828	0.798
	PV2	3.83	0.962		0.753	0.661	
	PV3	3.65	1.087		0.860	0.784	
Customer satisfaction (CS)	CS1	3.87	0.731	13.290	0.650	0.695	0.752
	CS2	4.00	0.793		0.691	0.708	
	CS3	3.73	0.817		0.751	0.725	
Purchase intention (PI)	PI1	3.88	0.680	14.740	0.810	0.747	0.820
	PI2	3.90	0.747		0.771	0.788	
	PI3	3.87	0.803		0.678	0.792	
Instrument total	Cumulative (%)			70.410			0.813
	KMO						
	<i>p</i> value						

SQ1 When a customer has a problem, the airline shows a sincere interest in solving it, *SQ2* Employees are able to handle customer complaints efficiently, *SQ3* Employees have enough knowledge about different services to respond to consumer's requests, *CE1* The airline was better than I expected, *CE2* This experience of doing business with this airline was exactly what I expected, *CE3* I feel the airline meets all my expected needs, *PV1* I have a good impression of the crew, *PV2* The airline has the reasonable price, *PV3* The airline offers good value for money, *CS1* I appreciate the attitude of crew, *CS2* I enjoy the customer incentive program, *CS3* Airline maintains good relationship with me, *PI1* I will purchase ticket again from this airline, *PI2* I would like to keep a close relationship with the airline, *PI3* I would recommend the airline to others

^a Items details for each construct

refers to the extent to which two measures of the same concept are correlated. Generally, the measures of convergent validity are factor loadings, average variance extracted (AVE) and composite reliability (CR) (Anderson and Gerbing 1988). There are a few measures that are useful for establishing validity and reliability: CR, AVE, maximum shared variance (MSV), and maximum inter-construct correlation (Max r) (Hair et al. 2009). As indicated in Table 2, $CR > 0.7$, $AVE > 0.5$, $MSV < AVE$, and $\sqrt{AVE} > \text{Max correlation}$. The results indicate proper validity and reliability for all the instruments being used in our study as well as validity and reliability for the entire CFA model as shown in Fig. 1.

CFA is used to check whether there is any strong empirical support for the proposed theoretical structure. Two broad approaches are used to assess the measurement model validity: an examination of the goodness of fit indices and evaluation of the construct validity (Hair et al. 2009). Using path analysis, the overall measurement model fit statistics indicated a good level of fit: CMIN/DF = 1.139 ($p = 0.186$), GFI = 0.969, AGFI = 0.954, IFI = 0.995, TLI = 0.993, CFI = 0.995, and RMSEA = 0.019. The results satisfy the required values for CMIN/DF, GFI, AGFI, CFI, IFI, TLI, and RMSEA to be a good model (Hair et al. 2009). Overall, the evidence of factor analysis, reliability, convergent validity and discriminant validity indicates that the proposed model is appropriate for testing the structural model.

4.2 Hypotheses testing

Using AMOS 22, we test the Structural Equation Model and the hypothesized causal relationships between different constructs of the proposed model (Fig. 1). We apply the maximum likelihood estimates (MLE) method recommended by in performing a path analysis and used Baron and Kenny (1986) guidelines when testing the mediation hypotheses. The results of the model test are indicated in Table 3. From the table, the following conclusions are drawn: SQ has no significant influence on CS (H1 is rejected); SQ has significant influence on CS ($\beta = 0.794$, $p < 0.001$) (H2 is supported); PV has no significant influence on CS (H3 is rejected); CS has significant influence on PI ($\beta = 0.711$, $p < 0.001$) (H4 is supported); SQ has no

Table 2 Tests of discriminant validity, convergent validity and composite reliability

	CR	AVE	MSV	Max r	PI	SQ	CE	PV	CS
PI	0.819	0.602	0.491	0.701	0.776				
SQ	0.750	0.501	0.090	0.300	0.148	0.708			
CE	0.779	0.541	0.491	0.701	0.701	0.099	0.735		
PV	0.804	0.579	0.090	0.300	0.168	0.300	0.084	0.761	
CS	0.752	0.503	0.450	0.671	0.671	0.110	0.659	0.173	0.709

CR > 0.7; AVE > 0.5; MSV < AVE; $\sqrt{AVE} > \text{Max } r$, $\sqrt{AVE}$ is bold face diagonal

significant influence on PI (H5 is rejected); CE has no significant influence on PI (H6 is rejected); and PV has no significant influence on PI (H7 is rejected).

Next, we test for the mediation of CS. The bias-corrected bootstrap 95% confidence interval (CIs) based on 5000 bootstrap samples for the indirect effect indicates that CS significantly mediates (full mediation) the relationship between CE and PI. Therefore, hypothesis H8b is supported. The mediation of CS between SQ-PI and PV-PI is not statistically significant resulting in rejection of hypotheses H8a and H8c (Table 4).

5 Discussion, conclusions and recommendations

5.1 Discussion

Our study has two main purposes: (a) to test the proposed research model (Fig. 1) and (b) to test for the mediating effect of VietJet customer satisfaction. VietJet is a representative of LCC in Vietnam. Our findings show some consistent results with the literature but some are different from the literature. To test our proposed model, eight hypotheses are proposed. Among them, seven tests the direct influences of predictor variables on outcome variables and the last one tests the mediating role of customer satisfaction.

Most of the findings in the literature suggest the service quality has a significant positive influence on customer satisfaction. However, Hsu et al. (2016) conclude that passengers of low-cost carriers are significantly less likely to complain about service quality. Regarding LCCs, like VietJet, should we rely on most findings related to traditional airlines or the findings from Hsu et al. (2016) hold true? We set Hypothesis 1 based on research for legacy airlines that the service quality of an airline has a significant positive influence on customer satisfaction. Our finding does not support this hypothesis while our findings are consistent with the findings from Hsu et al. (2016). Thus, together with the findings from Hsu et al. (2016), our findings conclude that, in general, service quality of LCCs, like VietJet, does not have any significant influence on customer satisfaction.

Table 3 Summary results of hypothesis testing

		Estimate	Statement of hypothesis	Result
H1	SQ $\rightarrow$ CS	-0.005	SQ has significant influence on CS	Rejected
H2	CE $\rightarrow$ CS	0.794***	CE has significant influence on CS	Supported
H3	PV $\rightarrow$ CS	0.069	PV has significant influence on CS	Rejected
H4	CS $\rightarrow$ PI	0.711***	CS has significant influence on PI	Supported
H5	SQ $\rightarrow$ PI	0.036	SQ has significant influence on PI	Rejected
H6	CE $\rightarrow$ PI	0.033	CE has significant influence on PI	Rejected
H7	PV $\rightarrow$ PI	0.003	PV has significant influence on PI	Rejected

*** $p < 0.001$

Table 4 Summary results of mediation analysis

	Estimate	Indirect (ab)	Direct (c')	Total (c)	Mediation of CS
SQ → PV	0.374***		0.374***		
SQ → CS	−0.007	0.022*	−0.007		
CE → CS	0.829***		0.829***		
PV → CS	0.059*		0.059*		
CS → PI	0.792***				
H8a SQ → CS → PI	0.029	−0.002	0.034	0.034	Rejected
H8b CE → CS → PI	0.046	0.564**	0.033	0.597**	Supported
H8c PV → CS → PI	0.011	0.049	0.003	0.053	Rejected

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The evidential lack of support for service quality having a direct bearing on customer satisfaction could be due to the fact that VietJet Air is labeled as a LCC. For Vietnamese customer of LCC, service quality is neither expected nor a concern. LCCs are expected to provide flight service at minimal cost and, consequently, eliminate many of the usual passenger services. Most of the passengers surveyed in this study were within the age range from 18 to 30 years old. These people may not be doing very well that they simply want to get from one place to another in the cheapest possible way. Thus, it is reasonable they do not care much about service quality.

Customer expectations significantly influence customer satisfaction. For LCCs, this is in agreement with the literature. Most research supports that expectations affect satisfaction (Reisig and Chandek 2001). Thus, customers experience a feeling of satisfaction when expectations are equal to, or greater than the reality of receiving the service. Customers of VietJet expect to travel from one place to another in the most economical possible way and their expectations are being met. Furthermore, if the customers have low expectations of the product or service and yet receive more than their expectations, they feel satisfied. Because of the very low-price tickets, the passengers do not have high expectations about VietJet Air's service, and thus, they easily feel satisfied.

Perceived value has a significant influence on customer satisfaction. The findings of this study rejects previous findings (Hsu et al. 2016) regarding LCCs. VietJet Air's passengers already expect low price and their expectations is met (as evident by H2); therefore, as long as they are concerned, value expectation questions (good value for the money or reasonable price) are not relevant to their satisfaction.

Customer satisfaction has a significant influence on purchase intention. This hypothesis was supported. According to Bhattacharjee (2001), customer satisfaction is known to be one of the most important issues governing success in the highly competitive business environment, because it affects customer retention. As found by Han (2013), passenger satisfaction is a powerful determinant of purchase intention. Service quality, customer expectation, and perceived value are not

directly related to purchase intention; however, VietJet Air is able to fulfill the demands of its passengers satisfactorily.

Following many researches who indicate that service quality is direct antecedents of behavioral intentions (Cronin and Taylor 1992), Hypothesis 5 proposes the direct positive effect of service quality on purchase intention. Nonetheless, our findings are not consistent with previous research and do not support this hypothesis. Customers of VietJet airline are willing to accept the not-so-optimal services of the airline. Passengers will continue to purchase the services because of the low prices, regardless of the service quality. However, similar to any other business, a low-cost airline company are not sure whether other competing airlines will not provide promotions at even a lower price in the future. To counter balance this, low-cost airlines should consider improving some aspects of their service, especially on minimizing flight delays and cancellations. The average flight delay rate within the first five-months of the year 2013 was 1% with about one million passengers being affected. The reason why our finding is different from the previous research is that VietJet Air is expected to offer affordable and low-cost tickets, and therefore, customers do not expect high quality of service.

Customer expectation has a significant influence on purchase intention. This finding is not consistent with some of the literature. Customer satisfaction mediates the relationship between customer expectation and purchase intention. This finding indicates that when expectations are met, customers are satisfied and satisfied customer intent to purchase more. For VietJet expectations do not directly influence purchase. Perceived value significantly influence purchase intention. This hypothesis is rejected and this result is consistent with previous research that proposed perceived value is direct antecedents of behavioral intentions (Cronin and Taylor 1992).

Hypothesis 8 states that customer satisfaction mediates the relationship between the independent variables including service quality (H8a), customer expectation (H8b), and perceived value (H8c); and the dependent variable (purchase intention). The findings show that H8b is supported, while both H8a and H8c are not supported. Therefore, customer satisfaction can be seen to fully mediate the positive relationship between customer expectation and purchase intention. Purchase intention of air passengers could, thus, be explained through the pathway in which customer satisfaction plays the role of a mediating variable in the relationship between customer expectation and purchase intention. On the other hand, customer satisfaction does not mediate the relationship between service quality, perceived value, and purchase intention. The purchase intention of air passengers could be explained through the pathway in which customer satisfaction plays an important role of a mediating variable in the positive relationship between perceived expectation and purchase intention.

5.2 Conclusions

Our findings emphasize that VietJet Air's passengers purchasing is not due to its good service quality or perceived value, but because their expectations of doing business with the airline are met. Though some of the findings in this research

support findings from the previous literature, other results are not consistent with the literature. For example, our findings are consistent with the literature, related to both LCCs and full service industry, to confirm that expectations directly affect satisfaction and conclude that customer satisfaction has a significant influence on purchase intention. However, when comparing our results with previous literature, the influences of perceived value and service quality on customer satisfaction and purchase intention differ from the previous literature related to full service industry.

Our findings also suggest that customer satisfaction can fully mediate the positive relationship between customer expectation and purchase intention. Purchase intention of air passengers could, thus, be explained through the pathway in which customer satisfaction plays the role of a mediating variable in the relationship between customer expectation and purchase intention. In short, VietJet Air's passengers would purchase its service in the future if they feel that their expectations are met when comparing the received performance of the service with the expected service performance. Based on these findings, this research provides a valuable assistance and guidance to the managers of VietJet Air by allowing them to be better informed about air passengers in Vietnam when they are considering their strategic marketing plans. Thus, managers of both LCCs and full service carriers should improve equally expectations and satisfaction of their customers in order to enhance purchase intention. Less effort and resources can be used to improve perceived value and service quality of LCCs. These two factors are not related to customer satisfaction and purchase intention of LCC customers.

5.3 Research limitations and future direction

There are some limitations associated with this research. The first is the sample. Because the sample for this research was just from three regions in Vietnam and only use VietJet Air, it may not be representative of LCCs in the world. The findings are primarily limited to Vietnam. To circumvent the limitation, further research could include samples from different major cities around the world as well as other airline companies operating globally. If researchers could get samples from many other countries, the results could make inference not only for Vietnam LCCs, but also for LCC industry in general. In addition, current research suggests that the link between CE and PI is mediated by CS. Further research could include exploring other variables such as word-of-mouth and perceived price. The analysis of a mediation effect by other variables would give some further interesting inferences.

Acknowledgements The authors are grateful to the Editor-in-Chief, Marco Vivarelli, and anonymous reviewers for substantive comments that have significantly improved this manuscript. The second author would like to thank Robert B. Miller and Howard E. Thompson for their continuous guidance and encouragement. This research has been partially supported by grants from Asia University, Hang Seng Management College, Lingnan University, Yuan Ze University, University of Finance and Accountancy, the Research Grants Council of Hong Kong, Ministry of Science and Technology (MOST), Taiwan. The Fundamental Research Funds for the Central Universities, China Postdoctoral Science Foundation (2016M600951), Humanities and Social Sciences Planning Fund of Ministry of Education (15YJA910004), Natural Science Foundation of Zhejiang Province (LY15A010006), Asia University, Hang Seng Management College, Lingnan University, the Research Grants Council of Hong Kong, Ministry of Science and Technology (MOST), Taiwan, and World Track Investment Ltd. The second

author would like to thank Robert B. Miller and Howard E. Thompson for their continuous guidance and encouragement. The research is partially supported by Beijing Normal University, Beijing Institute for Scientific and Engineering Computing, National Tsing Hua University, University of Sydney Business School, Erasmus School of Economics, Erasmus University Rotterdam, Complutense University of Madrid, Asia University, Hang Seng Management College, Lingnan University, Fundamental Research Funds for the Central Universities, China Postdoctoral Science Foundation (2017M610058), Natural Science Foundation of China (11626130, 11601227), Australian Research Council, and Natural Science Council, Taiwan, Ministry of Science and Technology (MOST), Taiwan, and Research Grants Council (RGC) of Hong Kong.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Aydemir, R., & Haytural, C. (2016). The effects of low cost carrier entry in the Turkish Airline industry. *Eurasian Economic Review*, 6(1), 111–124.
- Baker, D. A., & Crompton, J. L. (2000). Quality, satisfaction and behavioral intentions. *Annals of Tourism Research*, 27(3), 785–804.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351–370.
- Bollen, K. A., & Stine, R. (1990). Direct and indirect effects: Classical and bootstrap estimates of variability. *Sociological Methodology*, 20, 115–140.
- Bolton, R. N., & Drew, J. H. (1991). A multistage model of customers' assessments of service quality and value. *Journal of Consumer Research*, 17(4), 375–384.
- Brown, S. P., & Stayman, D. M. (1992). Antecedents and consequences of attitude toward the ad: a meta-analysis. *Journal of Consumer Research*, 19(2), 34–51.
- CAAV (Civil Aviation Authority of Vietnam). (2012). Vietnam's overall aviation market. <http://www.caa.gov.vn>. Accessed 15 Jan 2013.
- Chen, Z., & Dubinsky, A. J. (2003). A conceptual model of perceived customer value in ecommerce: a preliminary investigation. *Psychology and Marketing*, 20(4), 323–347.
- Chitnis, A. (2006). Satisfaction formation process for iranian airline passengers. Luleå University of Technology, unpublished Master Thesis, Sweden.
- Cronin, J. J., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56(3), 55–69.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307–319.
- Esmaceli, A. A., Manesh, B. A., & Golshan, E. (2013). Service quality, customer satisfaction and customer loyalty in RAJA rail transportation company. *International Research Journal of Applied and Basic Sciences*, 4(12), 4248–4253.
- Euronews. (2017). Flying cheap: 7 principles of low-cost airlines. <http://www.euronews.com/2017/03/01/flying-cheap-7-principles-of-low-cost-airlines>. Accessed 30 Jan 2017.
- Forbes, S. J. (2008). The effect of service quality and expectations on customer complaints. *Journal of Industrial Economics*, 56(1), 190–213.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56(1), 6–21.
- Govender, K. K. (2016). Exploring public transport service quality: the case of mini-bus taxi service in South Africa. *Eurasian Business Review*, 6(1), 101–116.
- Graham, A. (2014). The low cost carrier worldwide. *Tourism Management*, 43, 6–7.
- Grewal, D., Janakiraman, R., Kalyanam, K., Kannan, P. K., Ratchford, B., Song, R., et al. (2010). Strategic management of online and offline retail pricing: a research agenda. *Journal of Interactive Marketing*, 24(5), 138–154.
- Gummerus, J., Rindell, A., & Korkman, O. (2011). The role of brand images in consumer practices: uncovering embedded brand strength. *Journal of Product and Brand Management*, 20(6), 440–446.

- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th ed.). Upper Saddle River: Pearson Prentice Hall.
- Han, H. (2013). Effects of in-flight ambience and space/function on air travelers' decision to select a low-cost airline. *Tourism Management*, 37(8), 125–135.
- Hansemark, O. C., & Albinson, M. (2004). Customer satisfaction and retention: the experiences of individual employees. *Managing Service Quality*, 14(1), 40–57.
- Hansen, M. H., Hurwitz, W. N., & Madow, W. G. (1953). *Sample survey methods and theory*. New York: Wiley.
- Helkkula, A., Kelleher, C., & Pihlstrom, M. (2012). Characterizing value as an experience: implications for researchers and managers. *Journal of Service Research*, 15(1), 59–75.
- Heskett, J. L., & Sasser, W. E. (2010). *The service profit chain, handbook of Service Science* (pp. 19–29). New York: Springer.
- Howat, G., & Assaker, G. (2013). The hierarchical effects of perceived quality on perceived value, satisfaction, and loyalty: empirical results from public, outdoor aquatic centres in Australia. *Sport Management Review*, 16(3), 268–284.
- Hsieh, Y.-H., & Yuan, S.-T. (2010). Modeling service experience design processes with customer expectation management: A system dynamics perspective. *Kybernetes*, 39(7), 1128–1144. doi:10.1108/03684921011062746.
- Hsu, C. J., Yen, J. R., Chang, Y. C., & Woon, H. K. (2016). *Journal of Air Transport Management*, 52, 111–116.
- ICAO. (2017). Economic development: Low cost carriers (LCCs). <https://www.icao.int/sustainability/Pages/Low-Cost-Carriers.aspx>
- Kim, Y. K., & Lee, H. R. (2011). Customer satisfaction using low cost carriers. *Tourism Management*, 32(2), 235–243.
- Kotler, P., & Keller, K. L. (2012). *Marketing management* (14th ed.). Upper Saddle River: Prentice Hall.
- Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Tillmanns, S. (2010). Undervalued or overvalued customers: capturing total customer engagement value. *Journal of Service Research*, 13(3), 297–310.
- Lee, G. G., & Lin, H. F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail and Distribution Management*, 33(2), 161–176.
- Liao, Z., & Wong, W. K. (2008). The determinants of customer interactions with internet-enabled e-banking services. *Journal of the Operational Research Society*, 59(9), 1201–1210.
- Mason, C., & Simmons, J. (2012). Are they being served? Linking consumer expectation, evaluation and commitment. *Journal of Services Marketing*, 26(4), 227–237.
- Miles, J., & Shevlin, M. (1998). Effects of sample size, model specification and factor loadings on the GFI in confirmatory factor analysis. *Personality and Individual Differences*, 25(1), 85–90.
- Ministry of Culture, Sports and Tourism. (2016). International visitors to Viet Nam in December and 12 months of 2015. <http://vietnamtourism.gov.vn/english/index.php/items/9968>. Accessed 10 Mar 2016.
- Mohtasham, S. S., Sarollahi, S. K., & Hamirazavi, D. (2017). The effect of service quality and innovation on word of mouth marketing success. *Eurasian Business Review*, 7(2), 229–245.
- Moll-de-Alba, J. (2016). The need to adapt to travel expenditure patterns. A study comparing business and leisure tourists in Barcelona. *Eurasian Business Review*, 6(2), 253–267.
- Monroe, K. B., & Krishnan, R. (1985). The effect of price on subjective product evaluations. In J. Jacoby & J. Olson (Eds.), *Perceived quality*. Lexington: D.C. Heath.
- Moslehpour, M., Pham, V. K., & Yumnu, S. (2014). The mediating effect of quality and prestige on the relationship between brand globalness and purchase likelihood of HTC mobile phone. *International Business Research*, 7(1), 94–108.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17, 460–469.
- Oliver, R.L. (2010). *Satisfaction. A behavioural perspective on the consumer* (2nd edn. ed.) (M.E. Sharpe, New York).
- Olorunniwo, F., Hsu, M. K., & Udo, G. J. (2006). Service quality, customer satisfaction and behavioural intentions in the service factory. *Journal of Services Marketing*, 20(1), 59–72.
- Olson, J. C., & Dover, P. (1976). Effects of expectation creation and disconfirmation on belief elements of cognitive structure. *Advances in Consumer Research*, 3, 168–175.
- Ooi, K. B., Lin, B., Tan, B. I., & Chong, A. Y. L. (2011). Are TQM practices supporting customer satisfaction and service quality? *Journal of Services Marketing*, 25(6), 410–419.

- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41–50.
- Phang, S. Y., & Wong, W. K. (1997). Government policies and private housing prices in Singapore. *Urban Studies*, 34(11), 1819–1829.
- Pieters, R., Koelemeijer, K., & Roest, H. (1995). Assimilation processes in service satisfaction formation. *International Journal of Service Industry Management*, 6(3), 17–33.
- Ramseook-Munhurrin, P., & Naidoo, P. (2011). Residents' attitudes toward perceived tourism benefits. *International Journal of Management and Marketing Research*, 4(3), 45–56.
- Reisig, M. D., & Chandek, M. S. (2001). The effects of expectancy disconfirmation on outcome satisfaction in police-citizen encounters. *International Journal of Police Strategies and Management*, 24(1), 88–99.
- Schiffman, L., & Kanuk, L. L. (2004). *Consumer behavior* (8th ed.). Upper Saddle River: Prentice Hall.
- Soteriou, A., & Zenios, S. A. (1999). Operations, quality, and profitability in the provision of banking services. *Management Science*, 45(9), 1221–1238.
- Taylor, S. A., & Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70(2), 163–178.
- Teng, L., Laroche, M., & Zhu, H. (2007). The effects of multiple-ads and multiple-brands on consumer attitude and purchase behavior. *Journal of Consumer Marketing*, 24(1), 27–35.
- Tull, D. S., & Hawkins, D. I. (1987). *Marketing research, measurement and method*. New York: MacMillan Publishing Company.
- Whitlark, D. B., Geurts, M. D., & Swenson, M. J. (1993). New product forecasting with a purchase intention survey. *Journal of Business Forecasting*, 12(3), 18–21.
- Wittman, M. D. (2014). Are low-cost carrier passengers less likely to complain about service quality? *Journal of Air Transport Management*, 35, 64–71.
- Woodruff, R. B. (1997). Customer value: The next source of competitive advantage. *Journal of the Academy of Marketing Science*, 25(2), 139–153.
- Woodside, A. G., Frey, L. L., & Dale, R. T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing*, 9(4), 5–17.
- Wu, P., Yeh, G. Y. Y., & Hsiao, C. R. (2011). The effect of store image and service quality on brand image and purchase intention for private label brands. *Australasian Marketing Journal*, 19(1), 30–39.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2–22.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31–46.