



# How airline service quality determines the quantity of repurchase intention - Mediate and moderate effects of brand quality and perceived value

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## ABSTRACT

Drawing on an integrated framework of service quality theory, this study develops and demonstrates a mediation-moderation model of airline service quality that influences the repurchase intentions of passengers. This model associates service quality with individual behavioral and perception—brand awareness and perceived values and examines the buffering role of brand attractiveness and experience in the decision-making processes. In a sample of 451 passengers, somewhat as expected, airline service quality enhances the positive effect of repurchase intention on airline company service because it fosters a positive link between brand awareness and perceived value. Unsurprisingly, brand attractiveness and memorable brand experiences are found to strengthen the positive effect of brand awareness and perceived value. Several alternative models were used to check the robustness of our findings. Patterns of moderated mediation modeling for theoretical and empirical implications are discussed.

## 1. Introduction

In recent years, the rapid growth and development of China's economy has driven the demand for airline transportation and the requirement of service quality. In other words, airline service in China is no longer solely for high-end business travelers but has gradually been adopted by the general public (Wang et al., 2018). According to statistics from the Civil Aeronautics Administration Ministry of Transportation and Communication, 549 million passengers were carried in 2017. China's growing airline industry is also facing various challenges because of multicorrelations and the replaceability of transportation systems; the industry faces internal competition from sources such as the domestic high-speed rail industry and external competition from international foreign airline companies (Wang et al., 2017; Zhang et al., 2017). By developing a competitive advantage, an airline company can significantly enhance their competitiveness while reducing the cost of tickets (Gerardi and Shapiro, 2009; Stavins, 2001), improving their relationships with travel agencies (Alamdari, 2002), participating in corporate social responsibility (Ringham and Miles, 2018; Upadhaya et al., 2018), and completing horizontal mergers to increase their own productivity (Yan et al., 2018). However, owing to the variability and uncertainty inherent in China's airline industry, its impact is unlikely to be straightforward and it may sometimes fail to meet intended expectations and passenger satisfaction goals (Chow, 2015). With such

variability and uncertainty regarding requirements, most airline studies assert that “service quality” is the most important and foundational attribute for an airline company to create a competitive advantage (Chow, 2014; Gupta, 2017). Thus, there is a growing need to examine to what extent service quality is actually associated with passengers' requirements and why it might also succeed with regard to repurchase intention.

Moreover, some scholars have argued that in a highly competitive situation, service quality can incur intended positive consequences (Nadiri et al., 2008). For example, Wu et al. (2011) found that when consumers perceived the quality of service, this may result in influencing their behavior because of the positive awareness and image of the brand. Given that customers' requirements are the most difficult attribute to predict because of changing technology and service (Ringham and Miles, 2018), behavioral intention is likely to be one of the least predictable outcomes for service organizations (Chow, 2015). This is especially true because airline organizations often invest significant resources in identifying and predicting passengers' needs and behavioral intentions (e.g., Nadiri et al., 2008; Upadhaya et al., 2018). However, few scholars have produced an integrated mediation - moderation model and investigated whether and how airline service quality can produce both mediation and moderation consequences, such as brand equity improvement, perceived value and repurchase intention, simultaneously for China's airlines passengers.

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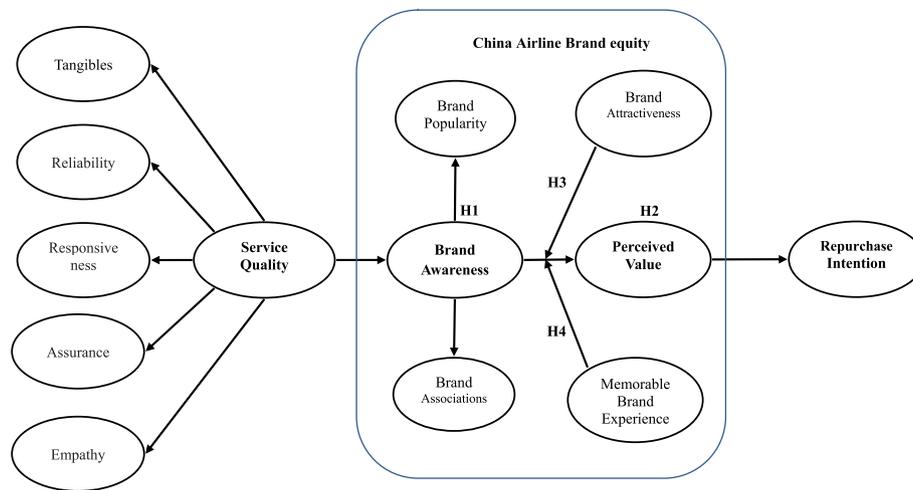


Fig. 1. Conceptual research framework - hypothesized model.

The majority of past service-related research linking service quality to individual behavior has taken a cognitive approach to evaluating the critical attributes associated with self-service intention in order to form expectations about service quality (Dabholkar, 1996). Chen (2016) argued that airline companies improve service quality by transporting passengers to their destinations on time, and by providing a comfortable and safe experience. Providing these improves brand reputation and thereby facilitates purchase intention in the future. Therefore, researchers have pointed to the possibility that brand reputation and brand equity perception among customers may respond to service quality affectively as well (e.g., Cretu and Brodie, 2007; Wu et al., 2011). According to brand equity theory (Bamert and Wehrli, 2005), brand equity's objective is to have customers differentiate the services of one company from those of competitors, which can lead to a broad affective range during consumption and evaluation of a service's value. These service evaluations, in turn, influence the perceived value of a customer's experience and therefore their future purchase or visit intention. As such, airline passengers' brand equity evaluation may constitute a key mediating mechanism between service quality and perceived value estimates.

This study develops and empirically examines a mediation-moderation model of service quality that uniquely depicts China's airline passengers' perspectives as a central mechanism through which service is related to repurchase intention by perceived value and brand awareness of airline service. In particular, drawing upon brand equity theory (Bamert and Wehrli, 2005), this study suggests that service quality, appraised as a foundational attribute for airline passengers, provides a constant source of pleasant experiences, which then simultaneously promotes the potential accumulation of brand equity. In addition, this study also identifies two potentially important attributes that influence passengers' affective characteristics— brand attractiveness and a memorable brand—and explores their moderating role in the developing and highly competitive Chinese airline industry. Brand attractiveness is defined as the consumer's evaluation of a brand as satisfying their self-verification needs or matching their actual sense of self with the brand (Elbedweihy et al., 2016: 2904). Further, a memorable brand experience refers to customers' moods and state-dependent memory process about the brand (Morrin and Ratneshwar, 2003: 11). In other words, customers have a positive memory of a brand with a concomitant change in optimistic mood valence. Thus, brand attractiveness and a memorable brand experience are predicted to increase brand awareness of Chinese airline service by helping passengers to experience, detect, feel and enhance the quality of service and perceived value.

Against the background of increasing attention to Chinese airline

industry growth, this study makes several contributions to the service and airline industry literature. First, this study builds on and extends service quality studies by highlighting the importance of other passengers' perspectives of airline brand equity accumulation. Second, this study is the first to introduce brand equity as an indirect driver of repurchase intention from a Chinese airline service perspective. Bamert and Wehrli (2005) asserted that perceived quality is a part of brand equity but do not consider the intervention of the mediating mechanism of brand awareness accumulation. Building on an integrated multiple mediation conceptual model, this study extends previous research by examining brand awareness as a mediator effect that links the relationships between service quality and perceived quality and value. Third, this study tests whether service quality is a second order attribute (i.e., tangibility, reliability, responsiveness, assurance, and empathy) that plays a dominant role in influencing passengers' awareness of brand popularity and brand associations. Several alternative models were used to check the robustness of the findings of second order factor relationships between service quality and brand awareness. This novel investigation provides additional insights into the role of service quality as a significant predictor of brand awareness with multiple attribute settings. Finally, in contrast with previous empirical studies that focus on a single moderating or mediating effect of service quality (Chow, 2014; Dabholkar, 1996; Wu et al., 2011), this study uses the moderation-mediation models to consider both potential effects within Chinese airline service. Fig. 1 depicts the proposed moderation-mediation conceptual model, which will develop the hypothesis in the following sections.

## 2. Theory and hypotheses development

The service quality reflected the consumer's overall appraisal of a service provider's efforts and whether these fit the customer desires and expectations; as a consequence, this eventually influenced their intention of repurchase (Chen, 2008). In the newly studied airline service, service quality and customer-based brand equity are highly connected and needed to be further addressed (Brodie et al., 2009; Erkmen and Hancer, 2015; Lin, 2015). In other words, customer-based brand equity, service quality and perceived value have been a core competence for an airline company in creating an enjoyable experience for passengers and eventually develop its own competitive advantages (Chen and Chang, 2008). However, few have explored whether this can succeed and yield outcomes of increased perceived value, or even the desirable outcome of attracting more customers. Therefore, the current study fits in the existing literature and highlights potential research gaps in several ways. First, this study demonstrates that brand attractiveness can help

customers be more aware of service quality, which influences the sequence perceptions for value evaluation (Kim et al., 2018; Maxwell and Knox, 2009). Specifically, a customer who rated a brand as highly attractive showed a greater tendency to allow their brand awareness and pleasant feelings towards airline service to grow into a high level of perceived value, where the perceived value is often beyond their awareness, desires, expectations, and needs (Lam et al., 2016). Second and alternatively, a memorable brand experience also moderates the relationship between brand awareness and perceived value. Past work on memorable brand experiences has tended to focus on measurement (Brakus et al., 2009; Kim et al., 2012) or consumer behavior prediction (Zarantonello and Schmitt, 2010). In accordance with brand equity research (Ha and Perks, 2005), the findings of this study extend existing research and current thinking by demonstrating that an increase in memorable brand experience leads customers to behave aggressively in terms of brand awareness, which contributes to value creation (Gentile et al., 2007). Altogether, the results of our study broaden the existing understanding of the relationship between service quality, customer-based brand equity and consumer behavior.

### 2.1. Service quality

Recently, the importance of quality and the demand for higher service quality has arguably become the most important consumer trend, particularly in airline service (Farooq et al., 2018; Trischler and Lohmann, 2018). Despite the important of service quality, there are various definitions of this characteristic suggested in the service or marketing literature, with numerous subdimensions of relevant features of service quality. The most cited source of service quality literature is Parasuraman et al. (1985), who asserted that characteristics of service quality should focus on three themes: service quality is more difficult to measure than goods quality, comparing the actual and expected service performance, and the process evaluation of service delivery. In exploratory research of focus group interviews and executive interviews, the ten critical dimensions of expectations and perceptions of service were: access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibility, understanding and knowing the customer. However, following service environment changes, the most common dimensions for measuring airline service quality are: (1) Tangibility: including the physical facilities or equipment to provide the service or representations of the service. In an airline company, this includes on-board equipment and facilities for providing airline service (Chen and Chang, 2005); (2) Reliability: service delivery accuracy, keeping promises or performing a service at the designated time. As Wu (2005) suggested, the reliability of airline schedules is widely discussed to evaluate schedule reliability because this highly influences passenger satisfaction. (3) Responsiveness: whether the employee responds to the customers' requirements immediately and quickly. Responsiveness is the most critical attribute of airline service quality for eliciting the passengers' desired outcomes (Rezaei et al., 2018). (4) Assurance: actively providing service and maintaining reliable standards. In the airline industry, assurance refers to employees' language skills and consideration and their ability to derive the trust and confidence of passengers in maintaining reliable airline service standards (Hussain et al., 2015). (5) Empathy: paying individualized attention to its visitors and/or customers. Following the customization trend, airline companies have to learn customer's specific needs and provide individualized attention to gain passengers' attention and loyalty (Psychogios and Tsironis, 2012).

### 2.2. Mediation roles of brand awareness and perceived value

Brand awareness is considered to be the sum of trust, relevance, and meaning of the customer's experience with and evaluation of the product or service delivery process (Chekalina et al., 2018). It shows how the customer feels about the related product or service and reflects the

true source of the brand's value. Tasci (2018) asserted that individual brand awareness recognition comes from the overall brand preference before the objective measurement of service or product consumption, which refers to their preference and perception. Further, Keller (1998) proposes that brand awareness is the difference in consumers' brand knowledge, which is stimulated by the promotion effect of a certain brand. Brand awareness comes from the customer's reaction to the brand's response. That is to say, the difference in the customer's response is reflected in the perception of brand marketing, preferences, behaviors, and reaction differences depending on the customer's knowledge of the brand (Jiang et al., 2017).

In the airline industry, Seo and Park (2018) asserted that airline brand awareness indicates that the passenger is familiar with the airline brand name, service and product, and this identification and brand memory increases the possibility of that brand being selected. Vatankhah and Darvishi (2018) studied Iranian private airline companies run by airline service brands and demonstrated that brand awareness functions as an intervening mechanism that links service quality to perceived value among flight attendants. In other word, when consumers have remembered the service quality an airline company provides, they were more likely to have a positive evaluation of that brand and consider it a potential candidate, which ultimately influences the perceived and estimated value for airline service. From the service received and the evaluation perspective, brand awareness generates a positive effect on perceived value. Brand awareness impresses potential as well as existing customers and enables airline companies to communicate positive brand value, which also influence customers' behavior intentions (Seo and Park, 2018). Alternatively, customers' perception of value can trigger a genuine repurchase intention and an inflow of new customers when existing customers have perceived a positive value of the service process. This means that perception of value functions as a foundational attribute for the communication of influences on customers' consumption behaviors (Patterson and Spreng, 1997). For the above reasons, the following hypotheses on the mediating effects are drawn from the existing literature.

**Hypothesis 1.** Brand awareness mediates the relationship between service quality and perceived value, such that service quality is positively and indirectly related to perceived value through brand awareness.

**Hypothesis 2.** Perceived value mediates the relationship between brand awareness and repurchase intention, such that brand awareness is positively and indirectly related to repurchase intention through perceived value.

### 2.3. Moderation roles of brand attractiveness and memorable brand experience

The above literature identifies perceived value as another important outcome of brand awareness and predicts repurchase intention. We also propose that brand awareness will be related to customers' perception of value based on two underlying mechanisms. The first mechanism is known as the "live the brand" mechanism of brand attractiveness (Maxwell and Knox, 2009). This view suggests that an organization's service or product competitiveness and attractiveness depend on the effective definition, communication and reminders of the brand's image (De Noni et al., 2014); the awareness of the brand has been emphasized as a critical factor that influences customers' perception of value and the degree to which this value attracts customers (So et al., 2017). When customers have been attracted by the brand and experience pleasant feelings, this is helpful in building consumer preferences and positive memories to maintain these pleasant affective states (Sophonsiri and Polyorat, 2009). In line with this reasoning, when employees continually experience pleasant feelings at service activities, this brand of service provider becomes more attractive, favorable, and

**Table 1**  
Descriptive information of participants.

Variables	Items	Frequency	Percentage (%)	Variables	Items	Frequency	Percentage (%)
Sex	Females	172	38.14	Occupation	Worker	103	22.84
	Males	278	61.64		Official	25	5.54
Marital status	Married	123	27.27	Teacher	39	8.65	
	Unmarried	325	72.06	Salesman	24	5.32	
	Divorced	2	0.44	Student	195	43.24	
	Widowed	1	0.22	Technical	25	5.54	
Age	20 below	38	8.43	Freelancer	16	3.55	
	21–25	235	52.11	Retirement	1	0.22	
	26–35	135	29.93	Soldier	2	0.44	
	36–45	26	5.76	Others	21	4.66	
	46–59	17	3.77	Annual flying times	The first time	48	10.64
Education	Senior high school and below	8	1.77		2–5 times	211	46.78
	Higher vocational	22	4.88		6–10 times	119	26.39
	Technical college	64	14.19		11–20 times	36	7.98
	Undergraduate	242	53.66	20 times or above	37	8.20	
	Postgraduate	115	25.50				

distinctive, which leads to a favorable impact on brand attractiveness and brand awareness and an increase in the positive evaluation of perceived value.

Second, according to the “*brand experience cocreates value*” model of Gentile et al. (2007), brand experiences determine customers' preferences and provide individuals with the opportunity to evaluate a brand regarding whether the given service is good or bad. This directly influences their cocreative value at the moment at which those memorable brand and feelings are being experienced. Further, pleasant experiences uniquely contribute to the formation of brand awareness through long-term marketing activities, such as advertising, pricing promotion, and service development, above and beyond the extent actives to which cognitive perceived value can contribute and influence behavior (Sophonsiri and Polyorat, 2009). As a results, an individual's pleasant memorable brand experience are likely to foster a more positive view of brand attractiveness, leading to an increase in the perceived value evaluation. Considering our earlier hypotheses that brand awareness is positively related to perceived value, we propose that brand attractiveness and memorable brand experience moderate and strengthen the relationship between brand awareness and perceived value.

**Hypothesis 3.** Brand attractiveness moderates the relationship between brand awareness and perceived value; such a relationship is strengthened when brand attractiveness is high.

**Hypothesis 4.** Memorable brand experience moderates the relationship between brand awareness and perceived value; such a relationship is strengthened when memorable brand experience is high.

### 3. Methods

#### 3.1. Sample and procedure

The quantitative method was used to measure customers' perceptions of Chinese airline service qualities and brand quality. To research the proposed purpose, several steps were used to collect data at Xiamen Gaoqi International Airport. First, comprehensive literature about service quality, brand equity, customer behavior, strategy marketing and airline industry management was studied to formulate the original survey. Second, the survey questionnaire was carefully selected from previous literature and translated directly from English to Chinese. Further, some of the original sentences were revised to fit the special research purpose. To ensure the original meanings were maintained and

prevent misleading the readers, two experts and scholars who have abundant research experience in airline service quality research were invited to evaluate the translated questionnaire in regard to whether the original meanings were maintained and to determine the appropriate Chinese items for measuring the airlines' service quality, brand equity and customer behavior. Third, research assistants were hired to collect data about twelve Chinese airlines with a presence in Xiamen Gaoqi International Airport: Air China, China Eastern Airlines, Hainan Airlines, China Southern Airlines, Shandong Airlines, Xiamen Airlines, Shanghai Airlines, Spring Airlines, Juneyao Airlines, Sichuan Airlines, Shenzhen Airlines. The participants included domestic and international tourists who wished to express their experience of Chinese airline service.

When the participant finished checking in for a Chinese airline, the research assistant recruited participants when they came out of the exit. The research assistants were waiting behind participants to increase response rates and they answered any questions or requests for clarifications for survey items. The period of data collection was during April and May of 2018. The 500 survey responses were distributed, 500 surveys were received, with a yield of a 100% response rate. However, when removing the invalid questionnaires with random answering, multiple missing values, or answers with obvious regularity (e.g., choose the same option for all items, the answer to “Z” glyph), the final sample was composed of 451 usable responses from participants, and the effective recovery rate was 90.2%. The specific conditions of the survey sample are as follows in Table 1.

Further, this study used a sample of passengers at Xiamen Gaoqi International Airport for several reasons. First, Xiamen is one of the first batch of special economic zones and an important tourist city in China. In recent years, the tourism industry has increasingly expanded with the economic development of Xiamen. Great numbers of Chinese and international visitors come to Xiamen for tourism purposes and they often use the Chinese airlines in this airport. Second, as the scale of airline market expands, the competition among domestic and international airline companies becomes increasingly fierce. Xiamen's international airport, as one of the most important regional aviation hubs in southeast China, reflects the development status of Chinese airlines. Third, in 2017, the 9th BRICS (Brazil, Russia, India, China and South Africa) Summit was held in Xiamen, which attracted more international attention and enhanced the status of Xiamen International Airport and which brought opportunities and challenges in improving the service quality and brand of Chinese airlines.

**Table 2**  
Variables of exploratory factor analysis, descriptive statistics and confirmatory factor analysis.

Indicator	Measurable variable	Mean	Standard Deviation	t-value	Standardized loading	CR	AVE
Tangibles	TA1	5.220	1.379		0.643	0.861	0.609
	TA2	5.479	1.314	14.371***	0.814		
	TA3	5.424	1.335	14.262***	0.847		
	TA4	5.016	1.347	13.730***	0.802		
Reliability	REL1	5.093	1.491		0.716	0.862	0.612
	REL2	5.525	1.293	16.039***	0.788		
	REL3	5.180	1.404	17.504***	0.867		
	REL4	4.922	1.400	15.008***	0.749		
Responsiveness	RES1	5.404	1.325		0.687	0.837	0.634
	RES2	5.268	1.372	16.144***	0.852		
	RES3	5.122	1.413	15.933***	0.839		
Assurance	AS1	5.430	1.274		0.862	0.911	0.718
	AS2	5.297	1.301	22.531***	0.824		
	AS3	5.645	1.259	23.167***	0.845		
	AS4	5.588	1.236	23.892***	0.859		
Empathy	EM1	4.902	1.471		0.695	0.767	0.524
	EM2	5.120	1.316	14.560***	0.721		
	EM3	5.470	1.215	14.752***	0.754		
Brand Popularity	BP1	4.430	1.370		0.675	0.875	0.639
	BP2	4.851	1.262	15.494***	0.837		
	BP3	4.898	1.227	15.998***	0.861		
	BP4	4.330	1.400	15.234***	0.812		
Brand Associations	BAS1	4.306	1.476	24.954***	0.896	0.905	0.706
	BAS2	4.506	1.466	20.340***	0.804		
	BAS3	4.341	1.573	20.509***	0.806		
	BAS4	4.326	1.377		0.851		
Perceived Value	PV1	4.845	1.396		0.833	0.930	0.768
	PV2	4.656	1.348	24.730***	0.900		
	PV3	4.765	1.352	24.120***	0.894		
	PV4	4.843	1.385	23.581***	0.876		
Repurchase Intention	RI1	4.494	1.499	25.992***	0.885	0.942	0.803
	RI2	4.550	1.462	28.523***	0.926		
	RI3	4.612	1.466	27.506***	0.906		
	RI4	4.667	1.471		0.866		
Memorable Brand Experiences	MBE1	4.180	1.458		0.912	0.923	0.633
	MBE2	4.268	1.411	24.820***	0.924		
	MBE3	4.623	1.389	22.135***	0.844		
Brand Attractiveness	BAT1	4.545	1.390	29.743***	0.918	0.952	0.869
	BAT2	4.625	1.356	31.722***	0.939		
	BAT3	4.619	1.357		0.940		

\*P < .05; \*\*P < .01; \*\*\*P < .001.

3.2. Variables and measurement

The study assessed six main constructs that measure Chinese airline service quality and tourists' true experiences. All measurement items utilized a seven-point Likert scale (1 = "very strongly disagree"; 7 = "very strongly agree"). The first construct is service quality. According to the article by Parasuraman et al. (1988), service quality is operationalized in five dimensions: tangibility, reliability, responsiveness, assurance and empathy. Based on the existing literature, eighteen items were used in this study. Second, eight items were cataloged into two subdimensions (brand popularity and brand association) to measure brand awareness according to the tow differential scale developed and validated by Washburn and Plank (2002) and Gil et al. (2007). Third, perceived value was measured using Kim et al. (2015) four-item measure. Fourth, repurchase intention was measured with Nadiri et al.'s (2008) four items. The final construct is brand attractiveness and memorable brand experience, which was adapted from So et al. (2017). Furthermore, this study also collected demographic information on

tourists, including gender, marital status, age, education level, occupation and annual flying amount. Table 2 shows the detailed measurement items including factor load, mean, standard deviation, t-value, standardized loading, composite reliability (CR) and average variance extracted (AVE) for all study variables.

The factor loading for each measure is reliable when the composite reliability (CR) is greater than 0.7 (Tasci and Milman, 2017). The values of the composite reliabilities in this study were from 0.767 to 0.952, which indicates that all indicators are representative of the latent constructs. Furthermore, the average variance extracted (AVE) values show the constructs' validity if it is above 0.5 (Kao et al., 2008). The average variance extracted values in this study ranged from 0.524 to 0.869, indicating that the average explanatory power of the constructs used in this study were adequate, and it is suitable for advanced analysis. To test discriminant validity, this study uses the root mean square of the correlation coefficient between the facet and other facets that is less than the AVE value of the facet as the standard. From Table 2, it can be seen that the discriminant validity between the facets selected by the

**Table 3**  
The results of cross-loadings in this study analysis.

	TA	REL	RES	AS	EM	BP	BAS	PV	RI	MBE	BAT
TA1	<b>0.729</b>	0.487	0.475	0.510	0.442	0.321	0.232	0.347	0.294	0.288	0.312
TA2	<b>0.860</b>	0.537	0.547	0.569	0.556	0.370	0.279	0.333	0.318	0.298	0.348
TA3	<b>0.886</b>	0.556	0.545	0.569	0.554	0.416	0.335	0.412	0.326	0.340	0.420
TA4	<b>0.861</b>	0.578	0.574	0.595	0.563	0.439	0.381	0.427	0.370	0.372	0.451
REL1	0.516	<b>0.811</b>	0.585	0.547	0.511	0.456	0.296	0.429	0.399	0.365	0.446
REL2	0.562	<b>0.829</b>	0.679	0.698	0.603	0.443	0.328	0.482	0.400	0.393	0.489
REL3	0.575	<b>0.903</b>	0.725	0.683	0.628	0.506	0.381	0.503	0.427	0.424	0.521
REL4	0.517	<b>0.810</b>	0.601	0.640	0.578	0.446	0.342	0.468	0.373	0.331	0.467
RES1	0.541	0.611	<b>0.802</b>	0.566	0.537	0.403	0.302	0.328	0.286	0.335	0.363
RES2	0.566	0.689	<b>0.898</b>	0.710	0.690	0.474	0.393	0.465	0.407	0.456	0.478
RES3	0.561	0.704	<b>0.891</b>	0.718	0.642	0.467	0.377	0.449	0.393	0.415	0.492
AS1	0.574	0.706	0.696	<b>0.898</b>	0.718	0.525	0.456	0.570	0.501	0.486	0.568
AS2	0.559	0.695	0.676	<b>0.877</b>	0.669	0.605	0.463	0.587	0.566	0.525	0.631
AS3	0.614	0.650	0.700	<b>0.879</b>	0.697	0.502	0.416	0.518	0.479	0.471	0.562
AS4	0.642	0.663	0.670	<b>0.896</b>	0.705	0.528	0.423	0.565	0.509	0.504	0.572
EM1	0.478	0.547	0.581	0.627	<b>0.848</b>	0.507	0.469	0.476	0.432	0.493	0.539
EM2	0.528	0.557	0.563	0.652	<b>0.877</b>	0.546	0.463	0.602	0.514	0.470	0.574
EM3	0.595	0.639	0.684	0.690	<b>0.757</b>	0.461	0.311	0.424	0.373	0.367	0.430
BP1	0.264	0.367	0.316	0.376	0.426	<b>0.759</b>	0.610	0.447	0.512	0.533	0.482
BP2	0.461	0.511	0.497	0.578	0.563	<b>0.882</b>	0.599	0.507	0.564	0.552	0.616
BP3	0.434	0.525	0.491	0.594	0.555	<b>0.897</b>	0.616	0.576	0.618	0.597	0.658
BP4	0.407	0.458	0.442	0.504	0.520	<b>0.857</b>	0.689	0.519	0.607	0.605	0.625
BAS1	0.346	0.380	0.388	0.457	0.476	0.670	<b>0.916</b>	0.545	0.606	0.648	0.636
BAS2	0.298	0.340	0.365	0.440	0.443	0.659	<b>0.861</b>	0.429	0.532	0.565	0.524
BAS3	0.287	0.291	0.275	0.358	0.369	0.624	<b>0.862</b>	0.426	0.574	0.603	0.509
BAS4	0.378	0.398	0.422	0.485	0.488	0.644	<b>0.890</b>	0.521	0.605	0.671	0.636
PV1	0.385	0.484	0.395	0.537	0.525	0.534	0.469	<b>0.883</b>	0.680	0.547	0.674
PV2	0.415	0.491	0.449	0.557	0.556	0.555	0.503	<b>0.928</b>	0.692	0.579	0.682
PV3	0.425	0.512	0.460	0.589	0.550	0.565	0.523	<b>0.918</b>	0.702	0.633	0.728
PV4	0.440	0.554	0.454	0.617	0.584	0.547	0.503	<b>0.910</b>	0.717	0.603	0.723
RI1	0.316	0.440	0.402	0.530	0.505	0.636	0.633	0.715	<b>0.914</b>	0.684	0.687
RI2	0.374	0.450	0.400	0.555	0.506	0.647	0.595	0.709	<b>0.940</b>	0.687	0.721
RI3	0.356	0.414	0.344	0.507	0.464	0.601	0.588	0.710	<b>0.929</b>	0.647	0.678
RI4	0.406	0.456	0.413	0.553	0.497	0.616	0.612	0.696	<b>0.905</b>	0.655	0.671
MBE1	0.329	0.369	0.394	0.468	0.481	0.600	0.644	0.569	0.642	<b>0.910</b>	0.664
MBE2	0.387	0.461	0.481	0.559	0.530	0.638	0.635	0.637	0.672	<b>0.930</b>	0.731
MBE3	0.331	0.376	0.375	0.472	0.428	0.561	0.621	0.530	0.629	<b>0.840</b>	0.617
BAT1	0.414	0.520	0.467	0.600	0.573	0.644	0.580	0.699	0.662	0.669	<b>0.917</b>
BAT2	0.438	0.550	0.485	0.611	0.573	0.664	0.620	0.711	0.696	0.710	<b>0.938</b>
BAT3	0.447	0.534	0.495	0.632	0.603	0.663	0.640	0.747	0.731	0.724	<b>0.941</b>

The factor loading are shown in bold.

questionnaire is good. It can be seen that the overall reliability and validity of this questionnaire is good.

### 3.3. Discriminant validity

In the discriminant validity test, we examined the extent to which the construct measure is empirically distinct from those of other constructs. First, we looked at the cross-loadings using the PLS-SEM algorithm (Chin, 1998), the results of which are presented in Table 3. Second, we conducted a correlation analysis of paired variables to prove any significant correlation between constructs in the measurement models. Third, we calculated the square root of the AVE of each construct and compared it with the correlation coefficients of paired variables in Table 4 (Fornell and Larcker, 1981; Hair et al., 2009). The results indicate that all of the item loadings on their respective construct are greater than their loadings on other constructs and that the square roots of AVE of each construct are also greater than the correlations between every pair of latent variables. Thus, the construct is acceptable and the discriminant validity can be confirmed.

### 3.4. Analyses of common method variance (CMV)

This study controlled for common method variance by performing several procedures. First, this study focused on a hypothesized relationship between airline service quality, brand awareness, perceived value, repurchase intention, brand attractiveness and memorable brand

experience from the perspectives of Chinese airline passengers. As Podsakoff et al. (2003) suggested, the systematic effect of measuring variables may exert a high correlation, and a test for a competing explanation for the correlation observed between the measures is needed. Thus, independent and dependent variables were separated in the questionnaire (Podsakoff et al., 2003), and variation inflation factor (VIF) was tested and is presented in Table 3 to explain the high correlation (Hongbumm et al., 2012). Second, we explicitly emphasized that there were no right or wrong answers in the measurement items (Mäkelä and Brewster, 2009), and asked tourists to express their true feelings about Chinese airlines. Third, confirmatory factor analysis was used to examine the factor structure and validate the core domains (Barrick et al., 2015). Finally, anonymity was guaranteed, and the main research purpose stated that it would not disclose personal information in the study (Podsakoff et al., 2003; Rogelberg et al., 2010). After the data collection procedure was finished, SPSS 21.0 was used to analyze the principal component of all items of the questionnaire. Using a Satorra-Bentler scaled chi-square difference test (Asparouhov and Muthen, 2005), we compared the results of the common factor model with the CFA results of the proposed measurement model. The result showed that the first principal component explained only 42.67% of the common method variance. Therefore, common method variance was not a major issue in this study.

**Table 4**  
Means, Standard deviation, Reliability and Distinguishing Validity.

Construct	TA	REL	RES	AS	EM	BP	BAS	PV	RI	MBE	BAT	VIF
<b>Service Quality(SQ)</b>												
Tangibles(TA)	<b>(.855)</b>											
Reliability(REL)	.645***	<b>(.858)</b>										3.200
Responsiveness(RES)	.642***	.770***	<b>(.832)</b>									3.370
Assurance(AS)	.672***	.762***	.770***	<b>(.910)</b>								4.170
Empathy(EM)	.635***	.694***	.727***	.788***	<b>(.771)</b>							3.230
<b>Brand Awareness(BAW)</b>												
Brand Popularity(BP)	.454***	.546***	.510***	.599***	.605***	<b>(.869)</b>						3.100
Brand Association(BAS)	.362***	.395***	.406***	.489***	.498***	.742***	<b>(.905)</b>					2.790
<b>Perceived Value(PV)</b>												
	.455***	.560***	.480***	.631***	.604***	.602***	.542***	<b>(.930)</b>				3.360
<b>Repurchase Intention(RI)</b>												
	.391***	.477***	.420***	.580***	.531***	.677***	.656***	.725***	<b>(.941)</b>			3.520
<b>Memorable Brand Experience(MBE)</b>												
	.455***	.560***	.480***	.631***	.604***	.602***	.542***	.647***	.771***	<b>(.874)</b>		3.090
<b>Brand Attractiveness(BAT)</b>												
	.458***	.573***	.515***	.657***	.623***	.699***	.650***	.749***	.747***	.767***	<b>(.924)</b>	3.930
Mean value	5.284	5.180	5.265	5.490	5.164	4.627	4.370	4.357	4.596	4.777	4.581	
Standard deviation	1.122	1.171	1.186	1.125	1.108	1.115	1.300	1.269	1.275	1.267	1.360	

\*P < .05; \*\*P < .01; \*\*\*P < .001; Internal consistency reliabilities are shown on the diagonal in bold.

### 3.5. Preliminary analyses of confirmatory factor analysis (CFA)

Given that the structure consists of multiple dependent and independent variables, we evaluated the first and second factor structural analyses of the items through a confirmatory factor analysis (CFA) of the latent constructs in the proposed model. The first factor includes perceived value, brand attractiveness, memorable brand experience and repurchase intention. The second factor analysis includes service quality and brand awareness. Several indexes were used to assess the overall model fit. These indexes include the Chi-square/degrees of freedom, normed fit index (NFI), relative fit index (RFI), incremental fit index (IFI), Tucker-Lewis index (TLI), comparative fit index (CFI) and root mean square error of approximation (RMSEA). The standardized coefficient loading in our proposed model presented high values for their respective factors. The theorized proposed five-factor model where specific scales were loaded on separate first order and second order latent factors displayed a good fit ( $\chi^2 = 1378.546$ ,  $p < .001$ ;  $\chi^2/df = 2.666$ ; NFI = 0.896; RFI = 0.888; IFI = 0.933; TLI = 0.927; CFI = 0.932 and RMSEA = 0.061). To rule out and detect the possibility of common method bias, we examined an alternative second-factor model of service quality that included the five subdimensions of tangibility, reliability, responsiveness, assurance and empathy. The fit of this model was good ( $\chi^2 = 384.663$ ,  $p < .001$ ;  $\chi^2/df = 3.077$ ; NFI = 0.934; RFI = 0.920; IFI = 0.955; TLI = 0.944; CFI = 0.955 and RMSEA = 0.068). We also conducted a second-factor CFA to directly assess the brand awareness of brand popularity and brand association ( $\chi^2 = 104.467$ ,  $p < .001$ ;  $\chi^2/df = 5.498$ ; NFI = 0.958; RFI = 0.939; IFI = 0.966; TLI = 0.949; CFI = 0.966 and RMSEA = 0.100). In both cases of service quality and brand awareness analysis and the overall CFA assessment, the first and second factor structural models provided a good fit for further data analysis. Thus, this provides statistical evidence that increases the confidence in the distinctiveness of these constructs.

## 4. Results

The values of the means, standard deviations, reliability estimates, correlations and square of the correlations of the variables are shown in Table 4. We predicted that the service quality indirectly impacts destination attachment through brand awareness (as predicted by Hypothesis 1) and perceived value (as predicted by Hypothesis 2). Furthermore, we predicted in Hypotheses 3 and 4 that the moderating effects of brand attractiveness and a memorable brand experience on brand awareness are strengthened by the passenger's perception of value.

We tested the proposed direct, indirect and moderating hypotheses

with structural equation modeling (SEM) using the AMOS 21 software. Awang (2015) proposed that researchers could conduct a path analysis in SEM by using the AMOS software to analyze the structural model for testing correlation, causation, mediation, and moderation effects. SEM provides a more complete discovery and examination of the whole of the proposed theoretical models, and avoids inaccurate standard error estimates or biased assessments due to nonindependent observations (Lowry and Gaskin, 2014). We employed the bootstrapping of 1000 samples and utilized the Monte Carlo approach to obtain bias-corrected confidence intervals. This approach provided estimates of standard errors and  $\chi^2$  tests of model fit that address the violations of normal distribution assumptions (Lian et al., 2014). The results in Fig. 2 shows that the hypothesized model provided a good fit for the data ( $\chi^2 = 1378.546$ ,  $p < .001$ ;  $\chi^2/df = 2.666$ ; NFI = 0.896; RFI = 0.888; IFI = 0.933; TLI = 0.927; CFI = 0.932 and RMSEA = 0.061).

As illustrated in Fig. 2, the five subdimensions of service quality (Tangibles,  $\beta = 0.787$ ; Reliability,  $\beta = 0.908$ ; Responsiveness,  $\beta = 0.932$ ; Assurance,  $\beta = 0.952$  and Empathy,  $\beta = 0.990$ ; all  $p < .001$ ) are related to the two subdimensions of brand awareness (Brand Popularity,  $\beta = 0.934$ ; Brand Association,  $\beta = 0.922$ ; all  $p < .001$ ). Further, service quality has a significant positive effect on brand awareness ( $\beta = 0.757$ ,  $p < .001$ ). Brand awareness is positively related to perceived value ( $\beta = 0.779$ ;  $p < .001$ ). Furthermore, the average indirect effects of service quality that are attributable to perceived value are statistically significant for brand awareness ( $\beta = 0.590$ ;  $p < .01$ ). As such, Hypothesis 1 is fully supported. With respect to Hypothesis 2, perceived value is related to repurchase intention, and the average indirect effects of brand awareness on repurchase intention through perceived value are statistically significant ( $\beta = 0.646$ ;  $p < .001$ ). Thus, Hypothesis 2 is supported. Finally, this study tested the bias-corrected 95% confidence interval (CI) and percentile 95% CI by AMOS 21 software. Table 5 shows that the value interval within the confidence interval does not include 0. In summary, the indirect effects of brand awareness and perceived value in the model are significant, which further certifies that both Hypotheses 1 and Hypothesis 2 are supported.

This study analyzes the moderating effect by adjusting variables as latent variables (Kenny & Judd, 1984). Hypothesis 3 predicts a positive interaction effect between brand awareness and perceived value when airlines have brand attractiveness. As shown in Table 6, the coefficient for the interaction term “Brand Awareness  $\times$  Brand Attractiveness” is positive and significant for passengers' perception of value ( $\beta = 0.503$ ;  $p < .001$ ). Following the suggestion of Aiken and West (1991), we plotted the interaction relationships between brand awareness and brand attractiveness at 1SD above (high brand attractiveness) and 1SD below (low brand attractiveness) the mean of tourists' perception of

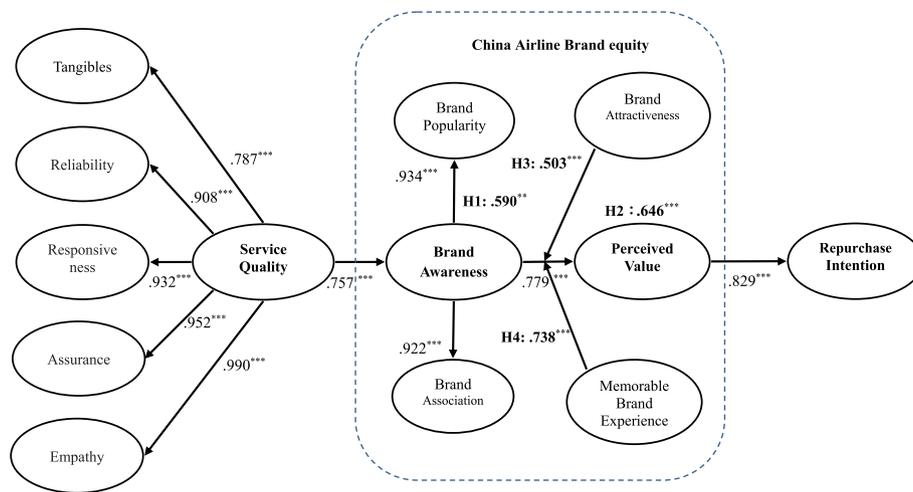


Fig. 2. Conceptual research framework - hypothesized model results.

value. As show in Fig. 3, the interaction effects of brand attractiveness were consistent with our predictions. Simple slopes showed that brand awareness cannot improve the level of perception of value when brand attraction is low. However, the relationship between brand awareness and perceived value is strengthened when brand attractiveness is high. Therefore, Hypothesis 3 is supported.

Hypothesis 4 predicts memorable brand experience given a positive interaction effect between brand awareness and perceived value. The results show that the coefficient for the interaction term “Brand Awareness × Memorable Brand Experience” is positive and significant for passengers’ perception of value ( $\beta = 0.738$ ;  $p < .001$ ). Simple slopes (in Fig. 4) show that memorable brand experience strengthens the relationship between brand awareness and perceived value at high level. Therefore, Hypothesis 3 is also supported.

4.1. Robustness checks

We performed additional analyses of the first order moderating effect of destination attachment to verify the robustness of our results. Seo and Park (2018) asserted that brand awareness should be split into two main dimensions of brand popularity and brand association, which have equal weights and reflect tourists’ willingness and behaviors. In the robustness check process, we first estimate the overall model fit for the data structure and subsequently follow a similar procedure to test our main hypothesis. We first assess our proposed two alternative theoretical models. Model 1 includes the two subdimensions of brand popularity and brand association. In addition, Model 2 includes the five subdimensions of tangibility, reliability, responsiveness, assurance and empathy. We then compare them with the original model. The results show that the alternative hypothesized model 1 achieved a good fit ( $\chi^2 = 1561.755$ ,  $p < .001$ ;  $\chi^2/df = 3.021$ ; NFI = 0.883; RFI = 0.873; IFI = 0.918; TLI = 0.911; CFI = 0.918 and RMSEA = 0.067). The robustness models remain consistent and have similar results to the previous model. The results for the alternative hypothesized model 1 standardized path estimates are summarized in Fig. 5.

Hypothesis 1 proposed that service quality indirectly impacts

perceived value through brand awareness. Brand awareness includes the two subdimensions of brand popularity and brand association. Consistent with the hypotheses, service quality is positively related to brand popularity ( $\beta = 0.747$ ;  $p < .001$ ) and brand association ( $\beta = 0.591$ ;  $p < .001$ ), and indirectly influenced perceived value (Brand Popularity,  $\beta = 0.529$ ; Brand Association,  $\beta = 0.381$ ; all  $p < .001$ ). In support of Hypotheses 2, brand popularity is positively related to repurchase intention through perceived value ( $\beta = 0.432$ ;  $p < .001$ ), and brand association is positively related to repurchase intention through perceived value ( $\beta = 0.239$ ;  $p < .001$ ). Thus, Hypotheses 1 and 2 are supported.

Next, we examine the moderating effects. The results show that the interaction term “Brand Popularity × Brand Attractiveness” is positive and significant for perceived value ( $\beta = 0.782$ ;  $p < .001$ ), and the interaction term “Brand Association × Memorable Brand Experience” is also positive and significant for perceived value ( $\beta = 0.879$ ;  $p < .001$ ). To more intuitively demonstrate the moderating effects of brand attractiveness and memorable brand experience, we plotted the two interactive relationships. Fig. 6 shows the interaction between brand popularity and brand attractiveness, and Fig. 7 shows the interaction between brand association and memorable brand experience. The plots in Fig. 6 show that when airlines have higher brand attractiveness, brand popularity is more positively associated with perceived value. The plots in Fig. 7 show that memorability strengthens the relationships between brand association and perceived value at high levels.

Second, we test the alternative hypothesized model 2. The robustness models have poorer results compared to the previous model ( $\chi^2 = 3023.618$ ,  $p < .001$ ;  $\chi^2/df = 5.837$ ; NFI = 0.773; RFI = 0.754; IFI = 0.804; TLI = 0.787; CFI = 0.803 and RMSEA = 0.104). The standardized path estimates are summarized in Fig. 8. The results show that brand awareness is related to the two subdimensions of service quality (Assurance,  $\beta = 0.434$ ; Empathy,  $\beta = 0.510$ ; all  $p < .001$ ). Brand awareness is positively related to perceived value ( $\beta = 0.745$ ;  $p < .001$ ), and perceived value is positively related to repurchase intention. Furthermore, the average indirect effects of brand awareness on repurchase intention through perceived value are statistically

Table 5  
Mediation effect test of service quality influence on repurchase intention through brand awareness and perceived value.

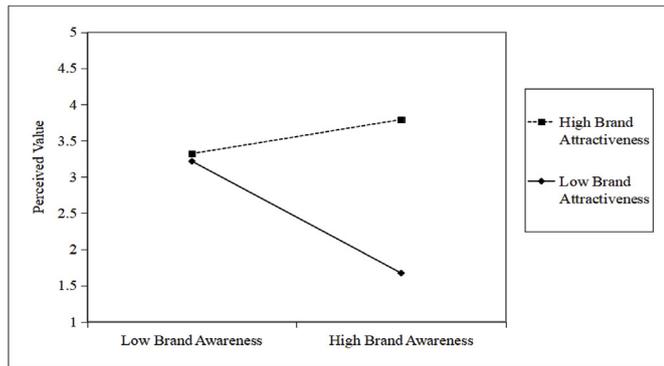
Hypothesis path	Standard error	Estimates	Bias-corrected 95% CI		Percentile 95% CI		Results
			Lower	Upper	Lower	Upper	
Service Quality → Repurchase Intention	0.045	0.489	0.396	0.567	0.400	0.569	
H1: Service Quality → Perceived Value	0.045	0.590	0.489	0.666	0.498	0.671	Support
H2: Brand Awareness → Repurchase Intention	0.040	0.646	0.557	0.717	0.560	0.720	Support

**Table 6**

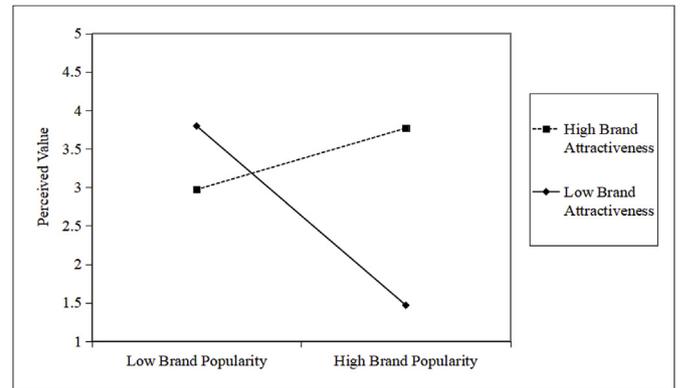
Moderating effect test of memorable brand experience and brand attractiveness on the relationship between brand associations and perceived value.

Hypothesis path	Standardized path coefficients	Standard error	Results
Brand Awareness → Perceived Value	- 0.269***	0.075	Support
Brand Attractiveness → Perceived Value	0.556***	0.090	
BAW * BAT → Perceived Value	0.503***	0.012	
Brand Awareness → Perceived Value	- 0.077***	0.106	Support
Memorable Brand Experience → Perceived Value	0.038***	0.100	
BAW * WBE → Perceived Value	0.738***	0.011	

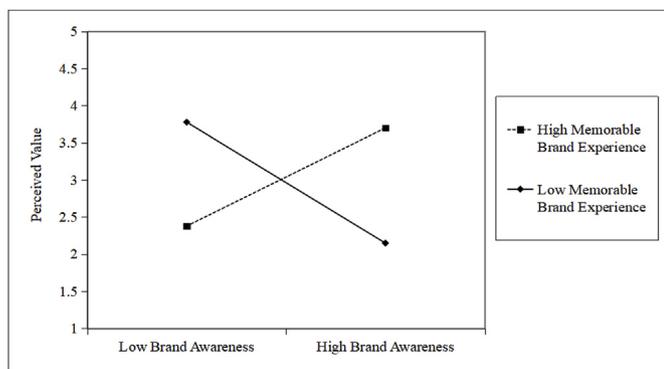
\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .



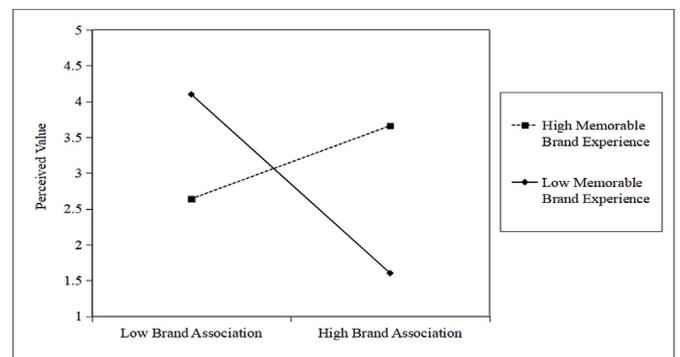
**Fig. 3.** Moderating effects of brand attractiveness on the relationship between brand awareness and perceived value.



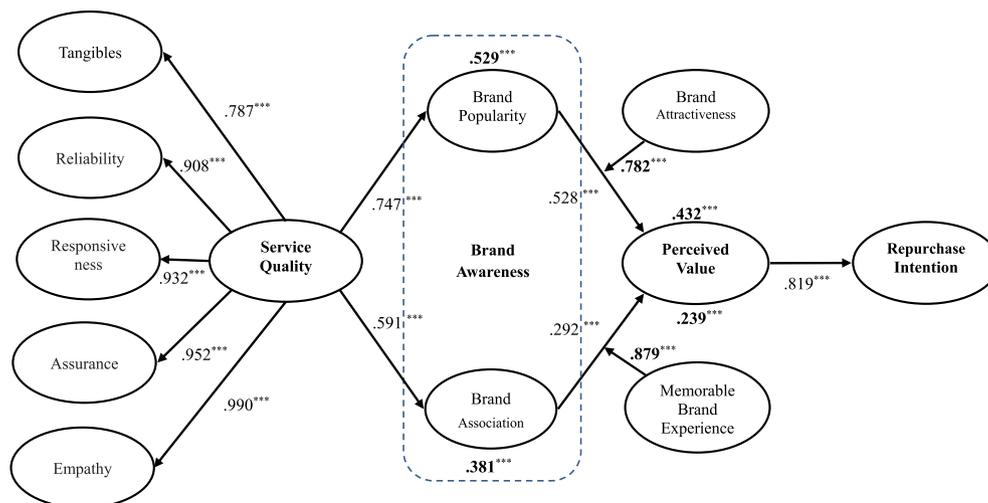
**Fig. 6.** Moderating effects of brand attractiveness on the relationship between brand popularity and perceived value.



**Fig. 4.** Moderating effects of memorable brand experience on the relationship between brand awareness and perceived value.



**Fig. 7.** Moderating effects of memorable brand experience on the relationship between brand associations and perceived value.



**Fig. 5.** Alternative Model 1 -Separation of the second factor order of brand awareness into brand popularity and brand association.

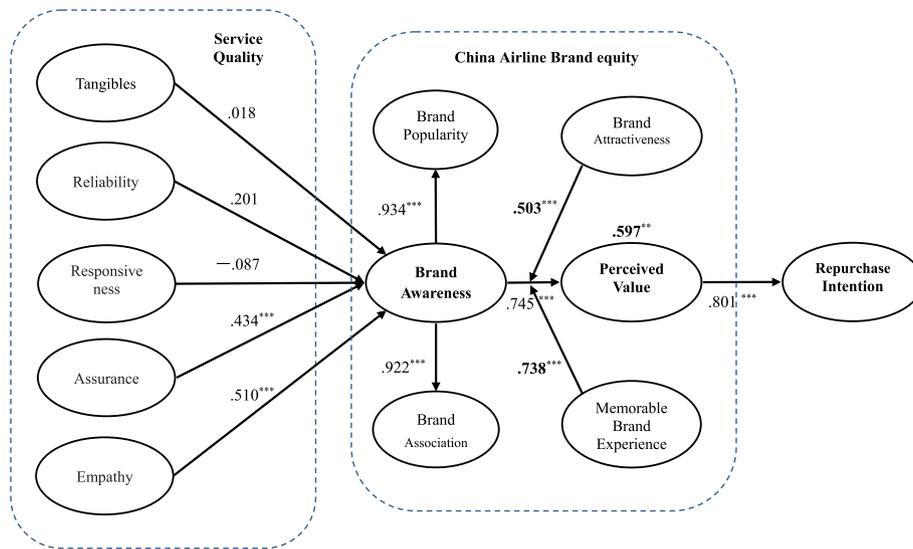


Fig. 8. Alternative Model 2- Separation of the second factor order of service quality into tangibility, reliability, responsiveness, assurance and empathy.

significant ( $\beta = 0.597$ ;  $p < .01$ ); therefore, Hypothesis 2 is still supported.

Third and finally, we test the alternative hypothesized model 3. In this alternative model, second order of service quality transforms into five dimension of tangibility, reliability, responsiveness, assurance and empathy, while brand awareness transforms into brand popularity and brand association. The robustness models have poorer results than the previous model ( $\chi^2 = 3169.840$ ,  $p < .001$ ;  $\chi^2/df = 6.167$ ; CFI = 0.792; GFI = 0.666; IFI = 0.792; AGFI = 0.614; and RMSEA = 0.107). The standardized path estimates are summarized in Fig. 9, which also confirms the original model presents the best model fit with this alternative model.

5. Discussion

Drawing on an integrated framework of service quality theory, this

study develops and demonstrates a mediation-moderation model of airline service quality that influences the repurchase intentions of passengers. This model associates service quality with individual behavioral and perception—brand awareness and perceived values—and examines the buffering role of brand attractiveness and experience in the decision-making processes. In a sample of the passengers of a Chinese airline, somewhat as expected, we found that service quality can yield desirable individual outcomes, such as increased brand awareness, brand popularity and brand associations, further boosting the value perceived by passengers. Moreover, the results also suggested that brand awareness can simultaneously increase perceived value, consequently increasing repurchase intention. Additionally, brand attractiveness and a memorable brand experience played a critical role in these complex decision-making processes by strengthening the relationships between brand awareness and perceived value. The theoretical and empirical implications are discussed in the following

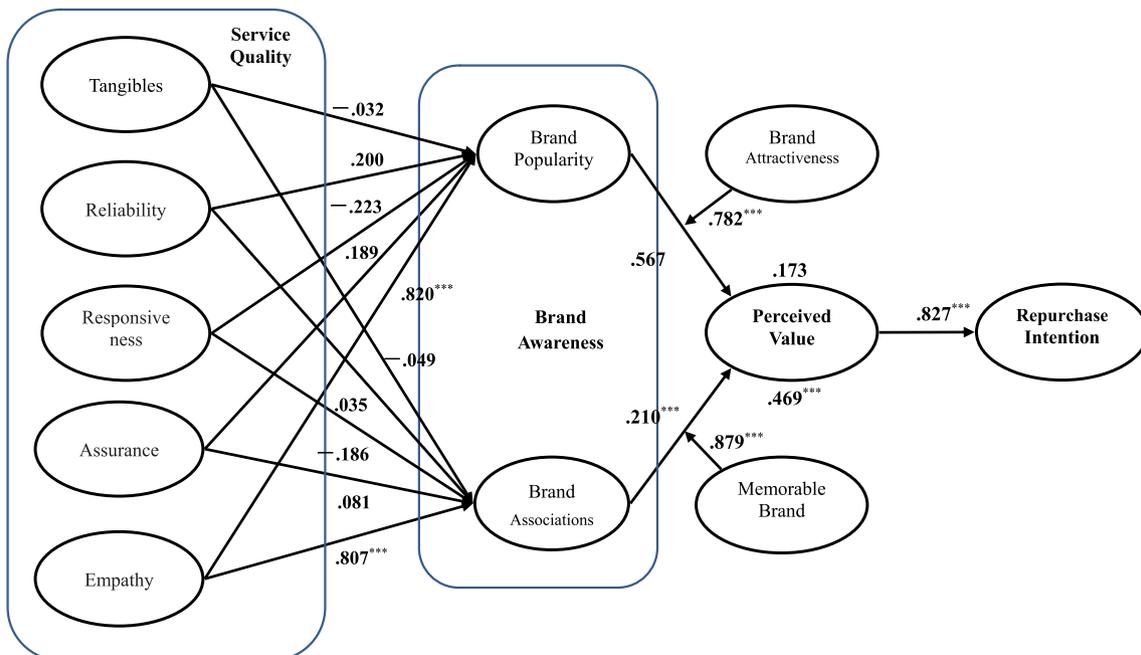


Fig. 9. Alternative Model 3- Separation of the second factor order of brand awareness into brand popularity and brand association, while also separating service quality into tangibility, reliability, responsiveness, assurance and empathy.

paragraphs.

### 5.1. Theoretical implications

The research findings and proposed model provide several distinct contributions that have some implications for the literature on tourism and marketing. The first contribution of this study to the literature on service quality and airline brand equity was the development and testing of an integrated model for the growing Chinese airline industry to guide marketing strategies for maintaining service quality and accumulating brand equity. Cheng et al. (2018) studied airline service in a Chinese context; similarly, the current research provides more meaningful information for an airline company to adjust their marketing strategy and concentrate on performance. Although existing tourism or management literature has examined the relationships between service quality and attitudes (e.g., trust, perceived benefits, satisfaction and perception) (Al-Debei et al., 2015; Punyani and Sharma, 2018) or customer-based brand equity (e.g., Kao and Lin, 2016), studies that consider different attributes and their mutual associations with service equity, airline brand equity, perceived value and repurchase intention have been surprisingly lacking in the existing literature. This study proposes a distinctive second modeling of those critical attributes, which has strong theoretical implications when assuming that service quality is a foundational function in influencing customer-based brand equity accumulation and sequence behavior. As such, this study provides an empirical examination that enriches the existing literature's understanding of service quality delivery processes and portrays it as a set of complex brand equity accumulation mechanisms working simultaneously within the passengers' perceptions of airline service.

Second, the findings of this research are consistent with previous airline consumer behavior research pointing to a positive association between the aspects of brand awareness (Seo and Park, 2018), perceived value (Jung et al., 2017) and repurchase intention (Liu and Lee, 2016). However, there has been an emerging requirement to empirically test the specific connection between brand awareness, perceived value, and repurchase intention (Das, 2014). Lam et al.'s (2016) study on green product and service marketing asserted that perceived value stems from the customer-based brand equity theory. This study contributes to both the customer-based brand equity and consumer behavior literature by investigating and confirming customer-based brand equity as a mediating mechanism through which the service quality that an airline company provides ultimately influences behavior intention (Voorhees et al., 2015).

Third, the empirical results of this study imply that brand attractiveness and a memorable brand experience are likely to have a stronger impact on perceived value to the extent that customers view brand attractiveness, and on a memorable brand experience as a critical part of influencing their feelings about the brand awareness that Chinese airlines have provided. Our study extended the study of Chen and Chang (2008) on airline brand equity, brand preference, and purchase intentions, and introduced two individual-level affective characteristics that may help to strengthen the airline brand equity concepts of brand awareness, brand attractiveness, and a memorable brand experience.

Finally, the results of this study make theoretical contributions to the service quality, brand equity and customer behavior literature on the experiences and perspectives of Chinese airlines. The study adds to the knowledge of customer experience and perspective by identifying service quality during service delivery as an important predictor of customer behavior. Specifically, the service quality and brand equity of airlines have multiple dimensions, which may provide an answer to what types of specific characteristic or distinctive attributes are particularly relevant to customer behavior (Bamert and Wehrli, 2005; Chen and Chang, 2005; Das, 2014; Punyani and Sharma, 2018). Our research also builds a conceptual framework and extends the brand equity literature by pointing out the potentially critical role of brand

attractiveness and memorable brand experience in coping with a catalyst in the measurement of value as perceived by customers.

### 5.2. Managerial implications

The results of this study have important managerial implications for service organizations regarding resource allocation, service quality improvement and development of appropriate strategies for attracting customers. First, this study found that service quality is an important part of a customer's airline service expectations, which also implies the need for employee training and discretionary efforts in achieving high-quality customer service (Dhar, 2015). Thus, it may be beneficial for service organization managers to institute organizational policies and employee training programs or opportunities that improve the customers' perception of the quality of service that an organization provides, as well as to provide sufficient organizational support for generating new ideas or solutions for service processes that may be helpful in improving existing services or in product innovation.

Second, brand equity plays an essential role for a service organization in achieving important outcomes such as trust, perceived benefit, satisfaction, perception and loyalty (Cretu and Brodie, 2007; Jiang et al., 2017). To design and deliver suitable quality encounters and outcomes, service providers or managers must understand that brand equity is determined by “value-in-use rather than value-in-exchange”; thus, improving quality delivery and outcomes would positively influence customer trust, satisfaction and brand equity (Kao and Lin, 2016). Thus, it is particularly important to help passengers or customers accumulate more pleasant feelings regarding service quality and positive brand equity through the experience an airline provides. For example, service providers or managers may formulate an appropriate marketing strategy of promotional websites highlighting unique images or positive passenger comments about their service experience or describing their impressions (Kim et al., 2018), which may increase customer perceptions of brand equity and increase the likelihood of their return (Liu and Lee, 2016). Thus, service organizations that can improve customer perceptions through unique images and impressions may have customers who are willing to recommend the organization to other friends, which eventually increases overall satisfaction and the intention to repurchase.

Lastly, the results of this study suggest that if customers find a brand to be more attractive and have a memorable brand experience, they will be more aware of the service value that can result from a positive evaluation of perceived value with high repurchase intention. Therefore, service organization managers may identify how to improve their customers' brand experience, such as pursuing consumer commitment and communication at every customer touchpoint (Şahin et al., 2017). Additionally, brand attractiveness helps consumers fulfill their self-definitional needs (So et al., 2017: 641). Thus, airline brand managers need to identify customer preferences with respect to specific features of the brand's appeal, so that the attractive attributes of this appeal can be transferred into their self-definitional needs or expectations, thereby increasing positive performance.

### 5.3. Limitations and suggestions for future research

Despite the contributions of this empirical study, there are several suggestions that need to be further considered in future studies on customer service or tourism. First, this study did not consider a cross-sectional design for mediation-moderation integrated model testing. Lindell and Whitney (2001) suggested that a cross-sectional design enables a partial correlation analysis to test any detected high correlations among variables for potential common method variance (CMV) contamination. Although this study used SEM and several alternative models to estimate overall model fit in order to avoid potential CMV, the findings suggest that a cross-sectional design for further research should still be made and extended with caution. Second, self-reporting

by individuals about their perceptions of Chinese airline service raises the possibility of same-source bias and imperfect measurement (Yeager et al., 2016), which suggests that the design of additional measures and pretest/posttest designs are needed (Muis et al., 2016). Thus, future research should use reports and surveys effectively and efficiently, by developing intervention designs (Muis et al., 2016) or experimental designs (Welch et al., 1999) to avoid measurement bias. Third, data for these measurement constructs (service quality, brand equity and repurchase intention) were collected in Xiamen Gaoqi International Airport. Although this airport is a good place to collect customer perceptions of Chinese airline service, it limits generalizability and decreases external validity for model extensions to other settings. Of course, samples selected from single sources provide the advantage of controlling for potential confounding bias and represents designs more effectively and efficiently (Tsai and Ghoshal, 1998). In addition, since this is the one of the biggest airports in China, it can represent a fundamental sample pool for investigating the tourist experience (Chi-Lok and Zhang, 2009). Future research may extend study findings, collect data from multiple airports in China and include foreign tourist opinions, which may increase the generalizability of the findings to other types of tourists. Finally, the proposed model and survey design were derived from Western journals or literature and applied to the experiences of Chinese airline passengers. As far as we know, there have been no prior empirical studies examining the relationships between repurchase intention, brand equity, perceived value, and service quality in Chinese culture. However, future research may also extend the findings of this study to different cultures for comparison and to verify the generalizability of this study.

#### 5.4. Conclusions

During this time of rapid economic development and growth in China, airline service quality is increasingly a requirement and a focus of attention for passengers. While the size of the air travel market is expanding, competition among airlines is also becoming increasingly fierce. Based on the increasing attention paid to Chinese airline quality, this study conceptualizes service quality and asserts that “Airline service is a complex chain that reflects passengers’ expectations of services and is divided into different critical parts and stages in the service process” (Chen and Chang, 2005: 79). Importantly, the findings of this study suggest that airline brand equity are key mechanisms that help clarify this complexity. The current integrated viewpoint points to the potential benefits of managing brand equity in ways that build on the positive forces associated with destination brand equity, while maximizing passengers’ pleasant feelings and image, that are then associated with positive consequences of repurchase intention and loyalty. In the meantime, we hope the results of this study will set the stage for future airline service quality studies to enhance the understanding of the complex processes of passenger or tourist behavior through the underlying concepts of service quality, brand equity, and the desired outcomes of behavioral intention.

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#### Appendix A. Supplementary data

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