



Applying consumer-based brand equity in luxury hotel branding



Matthew Tingchi Liu^a, IpKin Anthony Wong^{b,*}, Ting-Hsiang Tseng^c, Angela Wen-Yu Chang^d, Ian Phau^e

^a Faculty of Business Administration, University of Macau, Avenida da Universidade, Taipa, Macau, China

^b Faculty of International Tourism and Management, Av. Padre Tomas Pereira, City University of Macau, Macau, China

^c Department of International Business, Feng Chia University, No. 100, Wenhua Road, Xitun District, Taichung City 407, Taiwan

^d Faculty of Social Science, University of Macau, Avenida da Universidade, Taipa, Macau, China

^e School of Business, Curtin University, Kent St, Bentley, WA 6102, Australia

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ABSTRACT

This study examines the effects of consumer-based brand equity (CBBE) components (i.e., brand loyalty, brand awareness, perceived quality, and brand image) of luxury hotel brands on consumer brand attitude and purchase intention with brand performance as a contextual factor. Through a survey involving 327 tourists conducted in luxury hotels in Macau, results reveal that all four CBBE elements positively relate to brand attitude, and three directly influence purchase intention. Brand attitude mediates the relationship between four CBBE elements and purchase intention, and brand performance moderates the relationship between brand attitude and purchase intention. This study expands CBBE theory to include luxury hotel brands and contributes to the literature by clarifying the direct, indirect, and total effects of each CBBE element on brand attitude and purchase intention. In addition, the study identifies brand performance as a contextual factor rather than a consequence of brand equity and brand attitude.

1. Introduction

Branding is an effective tool for companies to identify and differentiate products or services in consumers' minds. Branding is a marketing strategy widely used to improve firm performance (Hsu, Oh, & Assaf, 2011; Liu et al., 2012; Mizik, 2014). The literature highlights building a strong brand as the primary goal of business (Aaker, 1996; Keller, 2008; O'Cass & Weerawardena, 2010). However, limited research exists on branding of luxury hotels, creating a gap in the literature. This study fills this gap by explaining how brand equity, attitude, and performance affect hotel guest loyalty intention.

The hospitality industry generally accepts hotel star ratings designated by Forbes (formerly, Mobil) Travel Guide, American Automobile Association (AAA), and other organizations (Verma, 2010; Sherman, 2007). The perception exists that a hotel awarded the Forbes Five Star award and/or AAA Five Diamond is a luxury hotel, and four-star and five-star hotels generally describe themselves as luxury hotels. The luxury hotel industry is a crucial and rapidly expanding segment of the hospitality industry. The Smith Travel Research (STR) report shows that the US luxury segment had the highest occupancy rate (72.3%) in the fourth quarter of 2014 (STR, 2015). The hotel industry's growth is

salient in Asia. For example, Marriott has 535 hotel properties open in the Asia-Pacific region and 475 in development (Marriott, 2016). The substantial growth of the luxury hotel segment draws considerable attention from researchers regarding the phenomenon of luxury consumption. Studies focus on emotional attachment (Hyun & Kim, 2014), guest loyalty (Yang & Lau, 2016), and status seeking (Yang & Mattila, 2013; Yang & Mattila, 2014). With marketing research shifting focus from one-time transactions to long-term relationship development between companies and consumers, the notion of consumer-based brand equity (CBBE) increasingly captivates managers and academics (Huang & Cai, 2015; Kim & Kim, 2005; Stahl, Heitmann, Lehmann, & Neslin, 2012). Efforts to value brands and identify drivers of brand preference have prompted much empirical research (Chaudhuri & Holbrook, 2001; Liu, Wong, Shi, Chu, & Brock, 2014; O'Cass & Weerawardena, 2010). However, research gaps exist. First, the current understanding of CBBE effects on service brands remains limited (Huang & Cai, 2015). Evidence suggests that brand equity substantially affects consumers' brand choice intentions (Lu, Gursoy, & Lu, 2015), brand reputation (Han, Nguyen, & Lee, 2015), and the mediating role of brand reputation on brand trust (Han et al., 2015). Nevertheless, such observations are limited to restaurants and are not applicable to

* Corresponding author.

E-mail addresses: MatthewL@umac.mo (M.T. Liu), anthonywong@cityu.mo (I.A. Wong), tsength@mail.fcu.edu.tw (T.-H. Tseng), WYChang@umac.mo (A.W.-Y. Chang), Ian.Phau@cbs.curtin.edu.au (I. Phau).

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the luxury hotel industry. Although Liu, Wu, Yeh, and Chen (2015) examine hotel brand equity, they do not discuss the effects of brand equity on consumer brand attitude and purchase intention. Hsu et al. (2011) develop a CBBE model for upscale hotels. However, the development of the model occurred before the strong growth of luxury travel market since 2011 and the emergence of distribution channels such as discount and flash sale websites (Market Publishers, 2013). Price promotions through discount websites negatively impact consumers who are in high need of status (Yang, Zhang, & Mattila, 2016). Therefore, a requirement exists for an updated CBBE model. Second, studies focus on conceptualization, assessment, and measurement of equity, and related causes and consequences in ordinary products and services. The underlying purchase decision process regarding CBBE elements in the context of luxury hospitality services remains to be addressed. Third, brand equity is of great financial importance and is discussed frequently in top marketing journals (Mizik, 2014; Simonin & Ruth, 1998; Stahl et al., 2012). Mizik (2014) reveals that brand equity positively affects firms' current financial performance, and has a greater impact on firms' future financial performance. Studies examine the mechanism of effects of brand equity on firms' performance; Stahl et al. (2012) reveal that CBBE is related to consumer acquisition and retention, which contribute to firm profits. Others find that consumers' brand attitudes significantly influence a brand's evaluation and purchase intention (O'Cass & Weerawardena, 2010; Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010; Sattler, Völckner, Riediger, & Ringle, 2010). The relationship between brand equity, brand attitude, and purchase intention requires further investigation. Brand performance might influence brand preference, which is a direct predictor of purchase intention (Chang & Liu, 2009; Liu et al., 2014). Although relationships among brand equity, brand attitude, brand performance, and purchase intention have been examined (Huang & Cai, 2015; Park et al., 2010), results are equivocal (Chang & Liu, 2009; Chaudhuri & Holbrook, 2001; Horng, Liu, Chiu, & Tsai, 2012). This study proposes an integrated model to further conceptualize the underlying mechanism of brand equity, brand attitude, brand performance, and purchase intention, which can aid marketers in understanding the impact of brand equity in a service setting (Helm & Özergin, 2015).

This study focuses on analyzing and understanding direct effects of CBBE elements of luxury hotel brands on consumers' (1) brand attitude and (2) purchase intention, (3) the mediating effects of brand attitude between CBBE elements of luxury hotel brands and purchase intention, and (4) the moderating effects of brand performance of luxury hotel brands between brand attitude and purchase intention. This study tests proposed relationships using a survey of 327 customers from luxury hotels in Macau, providing the following contributions.

First, in addition to the direct effects of CBBE elements, this study assesses potential indirect effects of CBBE on purchase intention using consumers' brand attitude. The study measures brand success or consumer responses in terms of brand attitude and purchase intention for a specific brand in the luxury hotel business. The study analyzes the effect of each CBBE element on two dependent measures: brand attitude and purchase intention. Second, this study delineates how CBBE elements influence consumers' responses in decision-making process using information integration and attitude accessibility theories. The study elucidates the mechanism of CBBE from the information processing perspective and contributes to CBBE literature by confirming and extending results of previous studies conducted in the service setting. This study confirms the applicability of the Aaker (1991) CBBE model in the luxury hospitality industry. This study provides empirical evidence in an emerging market of how CBBE elements of luxury hospitality brands relate to consumers' brand attitude and purchase intention. Results provide practical implications for international branding strategies and practices.

2. Literature review and hypotheses development

2.1. Consumer-based brand equity

Brand equity, a major marketing asset, creates competitive advantages and improves firms' financial performance (Mizik, 2014; Stahl et al., 2012). The conceptualization and measurement of brand equity are diverse and inconclusive (Huang & Cai, 2015). Despite diverging perspectives, the definition of brand equity is in terms of marketing effects unique to a specific brand. The power of a brand depends on convictions and perception of consumers, based on what they have learned, felt, seen, and heard (Keller, 2008). The value of a brand can only be realized when the brand is relevant to consumers (Cobb-Walgreen, Ruble, & Donthu, 1995). Following previous studies (Aaker, 1996; Huang & Cai, 2015; Keller, 2008; Stahl et al., 2012), this study adopts a customer-based approach, instead of product market or financial market approaches, to address consumer aspects affecting brand equity (Keller & Lehmann, 2003) and investigates the influence of brand equity on consumer responses.

Most CBBE studies represent two theoretical frameworks: Aaker's CBBE model and Keller's CBBE theory. Aaker (1991, p. 15) defines CBBE as a multidimensional concept, which is "a set of brand assets and liabilities linked to a brand, its name and symbol that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm's consumers." The definition of CBBE by Keller (1993) focuses on marketing, describing brand equity as the differential effect of customers' knowledge of a specific brand on responses to marketing activities and programs of that brand. Researchers propose various dimensions of brand equity linked to a brand (e.g., Aaker, 1996; Christodoulides, Cadogan, & Veloutsou, 2015; Hsu et al., 2011; Kayaman & Arasli, 2007; Nam, Ekinci, & Whyatt, 2011; Yoo & Donthu, 2001). The common denominator in all models is adoption of one or more dimensions from the Aaker model. This study uses perceived quality, brand loyalty, brand awareness, and brand image as common dimensions of CBBE. Consumer responses indicate brand attitude and purchase intention. Brand attitude is a predisposition to respond favorably or unfavorably to a brand (Phelps & Hoy, 1996), whereas purchase intention (or willingness to buy) is the likelihood that a buyer intends to purchase a product or service (Dodds, Monroe, & Grewal, 1991). These aspects yield competitive advantages for companies (Huang & Cai, 2015). This study treats brand attitude and purchase intention as outcome variables.

2.1.1. Brand loyalty

Brand loyalty is "the attachment that a consumer has to a brand" (Aaker, 1991, p.39). Numerous studies imply the relationship between brand loyalty and consumer responses. Reichheld (1996) demonstrates that brand-loyal consumers are willing to pay more for that brand. Higher brand loyalty can increase brand performance and improve sales-related outcomes (Chaudhuri & Holbrook, 2001). Grover and Srinivasan (1992) assert that loyal consumers respond more favorably to a brand than nonloyal or switching consumers. Loyal consumers purchase their favorite brand routinely and are less likely to switch brands (Yoo, Donthu, & Lee, 2000). Oliver (1999) claims that affective loyalty is an accumulation of a customer's past favorable experiences and can generate attitudinal orientation toward a brand. Liu et al. (2012) reveal that affective loyalty is positively related to attitudes toward cobranded products. In this study, brand loyalty refers to the attitudinal preference for a focal brand and the intention to buy the brand as a primary choice (Oliver, 2014). Hence, high brand loyalty can facilitate favorable brand attitude and generate higher purchase intention for luxury hotel brands:

H1a. Brand loyalty has a positive effect on consumers' brand attitude toward luxury hotels.

H1b. Brand loyalty has a positive effect on consumers' purchase intention for luxury hotel services.

2.1.2. Brand awareness

Brand awareness refers to whether consumers can recall, can recognize, or are aware of a brand (Huang & Sarigöllü, 2012; Keller, 2008). Brand awareness affects the decision-making process of consumers, and identified brands are more likely to be included in consumers' consideration sets and increase choices (Huang & Sarigöllü, 2012; MacDonald & Sharp, 2000). Although brand awareness is not a significant dimension of brand equity (Bailey & Ball, 2006; Kayaman & Arasli, 2007), consumers with brand awareness make initial decisions quicker than unaware consumers (Macdonald & Sharp, 2000). Macdonald and Sharp (2000) argue that high brand awareness has a positive effect and is more likely to motivate purchase behavior. From an information processing perspective, brand awareness increases information accessibility, and familiar information is more essential for judgment formation, resulting in a more favorable evaluation of a brand (Buchanan, Simmons, & Bickart, 1999; Simonin & Ruth, 1998). Empirical evidence suggests that brand awareness positively influences brand choice and market share (Hsu et al., 2011) and increases customer retention rates and profit margins (Stahl et al., 2012). Brand awareness can indicate brand commitment and motivate buyers to consider the brand during purchasing, leading to a favorable attitude toward and high purchase intention for that brand (Erdem, Swait, & Valenzuela, 2006). Hence:

H2a. Brand awareness has a positive effect on consumers' brand attitude toward luxury hotels.

H2b. Brand awareness has a positive effect on consumers' purchase intention for luxury hotel services.

2.1.3. Perceived quality

Zeithaml (2000) identifies perceived quality as a component of brand value. Aaker (1991) and Keller (2003) define perceived quality in the branding context as the consumer's perception of overall quality or superiority of a product or service with respect to the product or service's intended purpose and overall feeling about the brand. Perceived quality is related to consumers' judgments, which are formed after consumers compare expectations with perception of actual service performance (Bentzen, Christiansen, & Varnes, 2011; Horng et al., 2012). Considering the literature (Parasuraman, Zeithaml, & Berry, 2002), this study conceptualizes perceived quality as a brand's value proposition that renders customers endogenous to value creation, and embraces a process orientation in the service encounter that has superiority over other hotel brands.

Companies providing high-quality service have a competitive advantage and are probably more profitable (Bhat, 2005) because perceived high quality can increase brand preference (Liu et al., 2014) and motivate consumers to choose that brand over competitors (Yoo et al., 2000). In addition, because perceived brand quality is positively associated with brand attitude (Aaker & Jacobson, 2001), perceived brand quality frequently motivates consumers to buy certain products by distinguishing the brand from competitors (Aaker, 1991). Horng et al. (2012) demonstrate that perceived quality is positively related to behavioral intention. Hence:

H3a. Perceived quality has a positive effect on consumers' brand attitude toward luxury hotels.

H3b. Perceived quality has a positive effect on consumers' purchase intention for luxury hotel services.

2.1.4. Brand image

The terms brand image and brand association are used interchangeably (Hsu et al., 2011). Brand associations are concepts that correlate consumers' memory with a specific brand's name (Keller & Lehmann, 2006; Romaniuk & Nenycz-Thiel, 2013). Consumers often base their purchase decisions on perceptions of a company's brand

image (Kim & Kim, 2005). A strong brand image positively relates to consumers' willingness to pay premium prices (Cretu & Brodie, 2007; Keller, 1993). A unique brand image distinguishes the brand and the brand's value and acquires a certain position in a consumer's mind, which contributes to potential brand equity enhancement (Yoo et al., 2000). From the cognitive perspective, brand image reflects in the resources associated with functional features that attract tourists (Horng et al., 2012). When consumers have a positive image of a brand, they typically associate the brand with benefits and positive expectations of quality (Hyun & Kim, 2011). Hence:

H4a. Brand image has a positive effect on consumers' brand attitude toward luxury hotels.

H4b. Brand image has a positive effect on consumers' purchase intention for luxury hotel services.

2.2. Mediating effect of brand attitude

Brand attitude is the expression of an individual's evaluation of a brand and brand attitude manifests in consumer preferences and choices (Chang & Liu, 2009). Although studies implicitly address the mediating role of brand attitude (Liu et al., 2012; O'Cass & Weerawardena, 2010; Sattler et al., 2010), brand attitude's mediation between CBBE and consumer responses has not been investigated; extensive consumer-related studies highlight the prominence of brand attitude in consumers' decision-making process (Lee et al., 2014; Simonin & Ruth, 1998).

Consumers' behavioral intentions toward a brand functionally relate to perceptions and evaluations of that brand. Consumers' intention to use certain service providers is based on belief in the brand name in general (Lee et al., 2014). Information integration and attitude accessibility theories provide a basis for examining the role of consumers' attitudes in brand decision-making. The information integration theory describes the process of combining information from marketing stimuli with beliefs or attitudes (Simonin & Ruth, 1998). The two theories postulate that if brand attitude is more salient and accessible, information cues associated with that brand probably influence an individual's decision-making process. Consumers' decision to select a brand depends on specific brand attitudes (Chang & Liu, 2009). Accordingly, attitude is a stable psychological construct to predict subsequent consumer behaviors (Simonin & Ruth, 1998). Thus, one prediction is that brand attitude mediates the effects of CBBE on purchase intention for luxury hotel services:

H5a. Brand attitude mediates the effect of brand loyalty on consumers' purchase intention for luxury hotel services.

H5b. Brand attitude mediates the effect of brand awareness on consumers' purchase intention for luxury hotel services.

H5c. Brand attitude mediates the effect of perceived quality on consumers' purchase intention for luxury hotel services.

H5d. Brand attitude mediates the effect of brand image on consumers' purchase intention for luxury hotel services.

2.3. Moderating effects of brand performance

Consumer attitude comprises attitude valence and attitude strength. Attitude valence is the degree of positivity or negativity by which a brand is evaluated, and attitude strength is "the positivity or negativity (valence) of an attitude weighted by the confidence or certainty with which it is held" (Park et al., 2010). Per integrated information theory, perceptual or evaluative characteristics of proximate material influence judgments of a product or service, generally referred to as a context effect (Lynch, Chakravarti, & Mitra, 1991). Thus, related contextual factors, such as brand familiarity, could influence consumers' attitudes

toward a brand (Simonin & Ruth, 1998) and corporate social performance (Liu et al., 2014). Although brand performance is a consequence of brand equity and brand attitude (Chaudhuri & Holbrook, 2001; Park et al., 2010), this study considers brand performance as a contextual factor, which reflects a brand's marketing capability and confidence (O'Cass & Weerawardena, 2010). The notion of brand performance reflects the marketplace strength of a firm's brand, evidenced in the brand's market share, sales growth, and profitability. Brand performance is a critical aspect to compare a firm's product performance at a micro level with that at a macro-organizational level. Brand performance is discernible when the brand achieves the firm's marketplace objectives. Following O'Cass and Weerawardena (2010), this study defines brand performance as the relative measurement of a brand's success in the marketplace.

Brand performance indicators in the marketplace include a brand's market share and sales performance or profitability (O'Cass & Weerawardena, 2010). Brand performance constitutes additional information about the brand that influences consumers' brand attitudes by increasing confidence in the brand value and reducing perceived risk and uncertainty in decision making (Erdem et al., 2006). The consistency and credibility of brand perception and market performance facilitate positive consumer outcomes (Aaker, 1991). However, inconsistency between brand attitude and brand performance should result in a strong contrast effect (Scherer & Lambert, 2009). Researchers first observed the contrast effect in the field of psychophysics, including judgments of the heaviness of lifted weights, temperature of water, and brightness of lights (Wedell, Hicklin, & Smarandescu, 2007). The effect can be applied to people's evaluation of marketing stimulus (Wilcox, Roggeveen, & Grewal, 2011; Yeung & Wyer, 2004). When context information is not consistent with an expectation, consumers evaluate the target more negatively in an unfavorable condition than in a favorable condition (Wilcox et al., 2011). A recent study indicates that emergence of distribution channels such as discount websites is one of the main drivers for luxury hotels' high performance (Market Publishers, 2013). However, such high-performance might dampen the relationship between brand attitude and purchase intention. Empirical evidence indicates that consumers who are high in status needs exhibit less favorable attitudes toward a luxury hotel brand and a lower likelihood to return if the brand implements price promotions through discount websites (Yang et al., 2016). Applying the effect in the context of brands, when brand performance is low and based on customers' expectation, brand attitudes should exert a stronger effect in the low-performance condition than in the high-performance condition:

H6. In the market of the luxury hotel industry, brand performance can moderate the effect of brand attitude on purchase intention. Specifically, low brand performance can enhance the effect of brand attitude on purchase intention, whereas high brand performance has less impact on the relationship between brand attitude and purchase intention.

In summary, the conceptual framework encompasses the following major points (refer to Fig. 1). First, the model comprises the most critical CBBE elements identified in the literature as antecedents of two consumer responses, brand attitude and purchase intention. Second, the model includes different effects of each CBBE element on brand attitude and purchase intention. Third, the model encompasses direct effects of CBBE drivers on brand attitude and effects of CBBE elements on purchase intention. The model includes the indirect effects of CBBE elements on purchase intention mediated by brand attitude. Finally, the model incorporates an interaction between two variables, consumer-level brand attitude and market-level brand performance, as a boundary effect.

3. Research design

3.1. Measures of brand equity

This study adopted its measures from well-established scales. Table 1 displays details for each construct. Brand loyalty is measured using a four-item scale developed by Yoo et al. (2000) and Nam et al. (2011) on a seven-point anchor (Average variance extracted [AVE] = 0.58; composite reliability [CR] = 0.89; α = 0.95). For brand awareness, this study employs the three-item scale developed by Yoo et al. (2000) to measure this construct (AVE = 0.60; CR = 0.91; α = 0.89). The study measures perceived quality using an 11-item, seven-point scale (AVE = 0.64; CR = 0.95; α = 0.94) developed by Kim and Kim (2005) for the following reasons: (1) service quality is more complex than product quality and (2) the scale specifically measures perceived quality in the hospitality industry. Similarly, the study measures brand image using a 12-item, seven-point scale (AVE = 0.63; CR = 0.94; α = 0.89) established by Kim and Kim (2005). Christodoulides et al. (2015) argue that brand image has concerns regarding discrimination validity with other components in the CBBE construct, such as brand awareness and perceived quality. The reason for such concerns is that respondents in studies frequently focus on brand image at a generic level (refer to Keller, 1993). Items such as “it is clear what this brand represents” may cause crossloading with items that measure brand awareness or perceived quality. To resolve this issue, the measurement of brand image should be less generic and more brand-specific. Therefore, researchers prefer a specific measure of brand image, such as that developed by Kim and Kim (2005).

3.2. Measures of consumer responses and brand performance

Consumer responses to the marketing of a brand could reflect in aspects such as brand attitudes and recollection, selection, and evaluation of the brand (Huang & Cai, 2015; Keller, 2003). The study constructs this concept with different variables, including brand attitudes, consumer satisfaction, loyalty, purchase intentions, and consumers' willingness to pay a premium price and accepting brand extensions (Huang & Cai, 2015; Liu et al., 2014; Sattler et al., 2010; Simonin & Ruth, 1998). The present study conceptualizes consumer responses as the brand attitude and purchase intention for a specific luxury hotel brand.

The study measures brand attitude using a modified three-item semantic differential scale developed by MacKenzie and Lutz (1989) and Rojas-Mendez, Davies, and Madran (2009), evaluated as “bad–good,” “unpleasant–pleasant,” and “unfavorable–favorable” on a seven-point scale (AVE = 0.87; CR = 0.95; and α = 0.93). The study measures brand performance on a three-item, seven-point scale developed by O'Cass and Weerawardena (2010) in terms of market share, sales growth, and overall performance (AVE = 0.82; CR = 0.93; and α = 0.93). The study measures purchase intention on a three-item, seven-point scale (AVE = 0.79; CR = 0.94; and α = 0.95), developed by Liu and Brock (2011) and Moon, Chadee, and Tikoo (2008). The sample items include, “I'll consider staying at this hotel” and “I am glad to recommend this hotel to others.”

3.3. Data collection

The original questionnaire is in English. However, for this study, two language experts translate the questionnaire into Chinese and then back into English to ensure equivalence between the source and target languages. Researchers develop the final questionnaire based on a pretest administered to 30 Chinese consumers. The study randomizes the sequence of all items in the questionnaire to reduce possible carry-over effects. The data collection focuses on the luxury hotel industry in Macau, China. The city has developed rapidly over the past decade because of the liberalization of casino gambling laws in 2002 and is the

Fig. 1. Theoretical model.

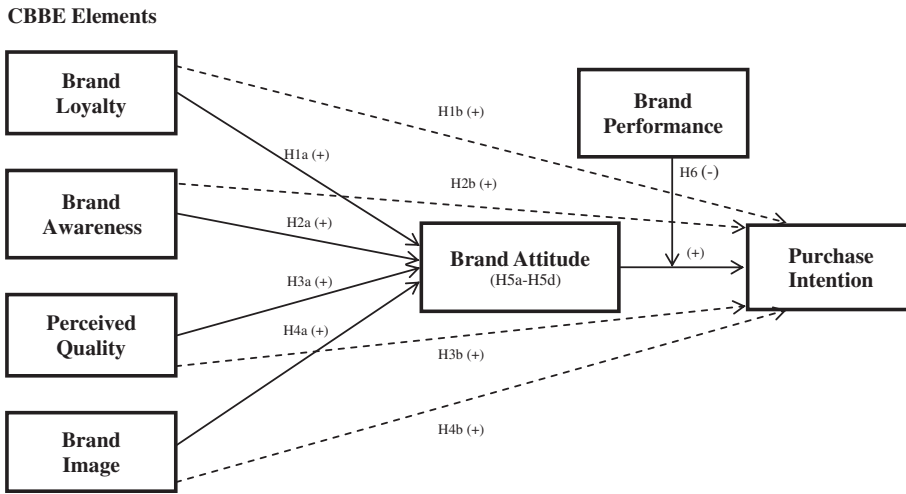


Table 1
Constructs of measurements.

Items	Measurement items	References
Brand loyalty	I will not stay at other hotels if this hotel is available. This hotel is my first choice compared to other hotels. I consider myself to be loyal to this hotel. I would not switch to another hotel the next time. (1 = strongly disagree, 7 = strongly agree)	Yoo et al. (2000) Nam et al. (2011)
Brand awareness	I am aware of the hotel. I can quickly recall the symbol or logo of the hotel. I can recognize the hotel among other competing brands. (1 = strongly disagree, 7 = strongly agree)	Yoo et al. (2000)
Perceived quality	The staff treat you as a special and valued consumer. The hotel has up-to-date equipment. The appearance of members (clean, neat, appropriately dressed). The hotel staff exhibits a good manner. The hotel provides its services at promised times. The hotel staff handles complaints of consumers effectively. The hotel staff actively communicates with consumers. Attractiveness of the hotel. The knowledge and confidence of the staff. The quality of food and beverages. The hotel staff anticipates your specific needs and serves you appropriately. (1 = strongly disagree, 7 = strongly agree)	Kim and Kim (2005)
Brand image	It is comfortable. It offers a high level of service. It is luxurious. It is expensive. It is a suitable place for high class. I become special by visiting this hotel. The staff is very kind. It is big and spacious. It is quiet and restful. Service is sometimes excessive to me. It has a long history. It has a differentiated image from other hotel brands. (1 = strongly disagree, 7 = strongly agree)	Kim and Kim (2005)
Brand attitude	My attitude toward the hotel is ____ (1 = Bad, 7 = Good) My attitude toward the hotel is ____ (1 = Unpleasant, 7 = Pleasant) Overall, my attitude toward the hotel is ____ (1 = Unfavorable, 7 = Favorable)	MacKenzie and Lutz (1989) Rojas-Mendez et al. (2009)
Brand performance	Relative market share of the brand is high. The brand has good sales performance. Overall performance of the brand is good. (1 = strongly disagree, 7 = strongly agree)	O’Cass and Weerawardena (2010)
Purchase intention	I will consider staying at this hotel. I am glad to stay at this hotel. I am glad to recommend this hotel to others. (1 = strongly disagree, 7 = strongly agree)	Moon et al. (2008) Liu and Brock (2011)

Table 2
Means, S.D., Reliability^a, AVE, MSV, and Correlations of variables.

Variables	Mean	S.D.	AVE	MSV	1	2	3	4	5	6	7
1 Brand loyalty	4.91	0.99	0.58	0.56	(0.95)						
2 Brand awareness	4.93	0.46	0.60	0.57	0.03	(0.91)					
3 Perceived quality	4.98	0.99	0.64	0.60	0.81**	− 0.01	(0.95)				
4 Brand image	4.50	1.17	0.63	0.58	0.71**	0.04	0.68**	(0.94)			
5 Brand performance	4.70	1.26	0.82	0.57	0.65**	0.07	0.60**	0.59**	(0.93)		
6 Brand attitude	5.20	1.26	0.87	0.61	0.69**	0.12*	0.70**	0.75**	0.58**	(0.95)	
7 Purchase intention	5.06	1.27	0.79	0.67	0.74**	0.09	0.73**	0.83**	0.63**	0.81**	(0.94)

Note:
S.D. = Standard Deviation, AVE = Average variance extracted, MSV = The Maximum Shared Squared Variance.

^a Reliability coefficients are in boldface on the diagonal in parentheses. N = 327.

* $p < 0.05$.

** $p < 0.01$ (Two-tailed tests).

only jurisdiction in China that permits casino gambling, which has become a highly commercialized, market-oriented, and internationalized industry (Liu et al., 2014). Since 2006, Macau has replaced Las Vegas as the world gambling capital. In 2016, Macau generated US \$28.6 billion in gaming revenue (a 10-fold increase since 2002) (Gaming Inspection and Coordination Bureau Macau SAR, 2017). The hospitality and gaming industries in Macau have considerably affected business development in the region; many leading luxury hotel brands and service providers have established businesses in the city, which is one of the world's most popular destinations with annual tourist arrivals exceeding 30 million. A convenience sampling method is used to collect data from visitors to two popular tourism sites in Macau. Nunnally (1978) recommends that, even with a moderate number of predictor variables, sample sizes of 300 to 400 are often necessary for multiple regression. Therefore, the study offers the survey to 400 tourists. Researchers ask tourists the following screening questions to determine whether they are qualified to answer the questionnaire: Q1: "Have you ever stayed at a hotel in Macau?" and Q2: "Which hotel have you recently stayed at?" Respondents who fulfill this criterion (who answer YES in Q1 and currently stay in one of the qualified luxury hotels in the "pre-defined luxury hotel list" which contains 5-star hotels in Macau) receive a copy of the questionnaire (with questions in Table 1) based on current hotel they stayed. After eliminating incomplete responses, researchers select 327 eligible responses for the final analysis. The sample represents hotel guests from > 10 luxury hotels (all five-star hotels), such as Sheraton, the Venetian, Sands, Sofitel, Wynn, Four Seasons, MGM, Conrad, Grand Hyatt, Okura, and Altira. The study uses statistical Package for the Social Sciences (SPSS) 20 and AMOS 21 for data analysis.

3.4. Sample characteristics

This study approaches 400 tourists for the survey, of which 327 (81.8%) respond and complete the questionnaire. Respondents represent different nationalities and areas, and most are Asian consumers (89.9%). The ratio is indicative of the Macau tourist market, and the sample represents actual consumer characteristics. Per the Macau Tourist Bureau, tourists from Asian countries account for 90% of the total tourist market. The sample represents diverse professional backgrounds, including managers (13.5%), business professionals (26.3%), technical professionals (10%), administrative staff (14%), service and sales workers (10.1%), students (15.3%) and others (10.8%). The sample is a balanced mix of male (47.2%) and female (52.8%) respondents. Regarding education, 62% of the respondents are graduates and 14.8% are postgraduates. Most respondents are young, aged between 21 and 30 years (52.1%) and 31–40 years (27.3%). The demographic characteristics of the sample are like those of the sample in the study by Zhan and He (2012), which addresses luxury consumption in China and reveals that 66.6% of respondents have an undergraduate degree or higher and 92% are aged between 20 and 40 years. For the

staying experience, 100% of respondents stayed in Macau for more than three days in current or previous trips; 40% of respondents stayed in current hotels more than once.

4. Analysis and findings

ANOVA examines whether a significant difference exists in CBBE among demographic variables. The results reveal no significant difference among groups of gender, age, education level, and annual income. In addition, ANOVA investigates whether CBBE is significantly different among repeat and first-time guests. Compared with first time guests, repeat guests have significantly higher brand loyalty scores. Table 3 illustrates the results.

4.1. Measurement model evaluation

First, this study investigates whether multicollinearity exists among the independent variables—four CBBE elements. This study calculates tolerance values, which are greater than the critical value of 0.1 (Hair, Anderson, Tatham, & Black, 1992), indicating no significant collinearity. Simultaneously, variance inflation factor (VIF) tests multicollinearity. All VIF values are less than four, less than the critical value of 10; this study perceives no severe multicollinearity problem (Kleinbaum, Kupper, & Muller, 1988).

Second, this study conducts a confirmatory factor analysis (CFA) to examine measurement model fitness and construct validity. Model fit indices indicate that the measurement model is satisfactory: χ^2 (680) = 1392.62, $p < 0.001$; CFI = 0.95; normed fit index = 0.90; and root mean squared error of approximation = 0.056. All standard factor loadings are significant (all $ps > 0.001$). The scale CR and AVE for each construct is satisfactory (Fornell & Larcker, 1981). The CR ranges from 0.89 to 0.95, indicating adequate scale reliability. The AVE ranges from 0.58 to 0.87, exceeding the acceptable level of 0.50. Therefore, constructs of interest are reasonably reliable and valid.

4.2. Testing direct effects

The four CBBE elements significantly correlate to brand attitude and purchase intention (all $ps < 0.05$) (refer to Table 2). The study tests relationships between the CBBE elements and brand attitude (H1a, H2a, H3a, and H4a) with multiple regression analysis (Schumacker, 2002). For the direct effects of CBBE on brand attitude (Model 1 of Table 4), the main effects of the four elements on brand attitude are all significant (F (4322) = 146.63, $p < 0.001$). Specifically, brand loyalty ($\beta = 0.51$, $t = 9.80$, and $p < 0.001$), brand awareness ($\beta = 0.28$, $t = 3.07$, and $p < 0.01$), perceived quality ($\beta = 0.35$, $t = 4.68$, and $p < 0.001$), and brand image ($\beta = 0.15$, $t = 2.00$, and $p < 0.05$) are positively related to brand attitude. The results support H1a, H2a, H3a, and H4a. A similar regression analysis tests the relationship between CBBE elements and purchase intention (H1b, H2b, H3b, and H4b). As

Table 3
ANOVA and *t*-test results for control variables.

CBBE elements	Gender	Age	Education level	Annual income	Repeat guests (Y/N)
	F value	F value	F value	F value	t value
Brand loyalty	0.06	0.96	0.61	1.84	− 3.49**
Brand awareness	0.31	0.57	1.51	0.72	− 2.12*
Perceived quality	0.99	0.99	0.59	1.55	− 0.44
Brand image	0.09	0.60	0.26	1.71	− 1.37

* *p* < 0.05.
** *p* < 0.01.

Table 4
Direct effect of brand equity on brand attitude and purchase intention.

CBBE elements	Direct effects on consumer responses					
	Model 1			Model 2		
	Brand attitude			Purchase intention		
	Coefficient	S.E.	t-value	Coefficient	S.E.	t-value
Brand loyalty	0.51***	0.05	9.80	0.45**	0.05	9.66
Brand awareness	0.28**	0.09	3.07	0.08	0.07	1.19
Perceived quality	0.35***	0.07	4.68	0.18**	0.06	2.93
Brand image	0.15*	0.08	2.00	0.15*	0.06	2.43
R ²			0.65			0.79
Adjusted R ²			0.64			0.78

Note: Unstandardized coefficients are reported. S.E. means standard error.

* *p* < 0.05.
** *p* < 0.01.
*** *p* < 0.001(Two-tailed tests), N = 327.

shown in Model 2 of Table 4, the model of CBBE effect on purchase intention is significant (F (4322) = 244.39, *p* < 0.001). Brand loyalty ($\beta = 0.45$, *t* = 9.66, and *p* < 0.001), perceived quality ($\beta = 0.18$, *t* = 2.93, and *p* < 0.01), and brand image ($\beta = 0.15$, *t* = 2.43, and *p* < 0.05) have a positive effect on purchase intention for the preferred brand. However, brand awareness is not directly related to purchase intention ($\beta = 0.08$, *t* = 1.19, and *p* > 0.10). Hence, the results

Table 5
The direct, indirect and total effects of CBBE on purchase intention, and moderating effect of brand performance.

Variables	Direct effect on PI			Indirect effect ^a on PI			Total effect ^c on PI			Moderating effect ^d		
	Coefficient	S.E.	t-value	Coefficient ^b	S.E.	t-value	Coefficient	S.E.	t-value	Coefficient	S.E.	t-value
Main effects												
Brand loyalty	0.45**	0.05	9.66	0.16***	0.05	6.29	0.61***	0.04	13.89	0.43*	0.05	9.51
Brand awareness	0.08	0.07	1.19	0.09**	0.07	2.89	0.17*	0.08	2.27	0.07	0.07	1.08
Perceived quality	0.18**	0.06	2.93	0.11***	0.06	4.24	0.29***	0.06	4.57	0.15*	0.06	2.60
Brand image	0.15*	0.06	2.43	0.05*	0.06	1.96	0.20**	0.06	3.03	0.12*	0.06	1.96
Mediator												
Brand attitude	0.32***	0.04	7.27							0.30***	0.04	7.01
Moderator												
Brand performance										0.08*	0.03	2.41
Brand performance × Brand attitude										− 0.08***	0.02	− 4.69

PI = Purchase intention.

^a To calculate the indirect effect of a variable X on purchase intention, this study multiplies the regression coefficient for that variable on brand attitude with the regression coefficient for brand attitude on purchase intention.

^b To test the significance of indirect effect or the mediating effect of brand attitude, the PROCESS macro bootstrapping procedure (n = 5000, model 4) was performed for each variables.

^c To calculate the total effects of a variable X on purchase intention, the direct effect and indirect effects of that variable are summed up.

^d To test the moderation effect, the CBBE main effect is controlled and multiple regression is used to test the interaction effect.

* *p* < 0.05.
** *p* < 0.01.
*** *p* < 0.001(Two-tailed tests), N = 327.

support H1b, H3b, and H4b, but reject H2b.

4.3. Testing the mediating effect

To investigate whether the brand attitude mediated the relationship between each CBBE element and purchase intention, this study performs the PROCESS macro bootstrapping procedure (n = 5000, model 4) (Preacher, Rucker, & Hayes, 2007). Bootstrapping is a nonparametric resampling procedure for testing mediation that does not impose the assumption of normality of the sampling distribution (Preacher & Hayes, 2008). Table 5 displays the details of direct, indirect, and total effects of CBBE elements on purchase intention. Results indicate that the mediating effects of brand attitudes for all CBBE elements are supported (all indirect effects significantly differ from zero). In addition, brand attitude fully mediates the effect of brand awareness on purchase intention, which explains why the results reject H2b. Brand attitude partially mediates the effects of brand image, brand loyalty, and perceived quality on purchase intention. The findings support H5a, H5b, H5c, and H5d.

4.4. Testing the moderating effect

Per H6, although brand performance enhances the effect of brand attitude on purchase intention, the strength of the effect differs. To test the moderating effect, this study controls for the main effects of CBBE on purchase intention and conducts multiple regression after mean-centering the relevant variables to minimize the possible presence of multicollinearity (Aiken & West, 1991). Regression results indicate a significant interaction effect between brand attitude and brand performance on purchase intention ($\beta = -0.08$, *t* = − 4.69, and *p* < 0.001). To investigate the interaction process, this study follows Aiken and West (1991) and plots the interaction effect with one standard deviation higher and lower than the mean. Brand attitude positively relates to purchase intention for both high and low brand performance conditions (both *p* < 0.001). However, the positive effect of brand attitude on purchase intention is stronger when brand performance is low than when brand performance is high ($\beta_{low} = 0.78$ vs. $\beta_{high} = 0.53$). The findings support H6. Fig. 2 illustrates the result.

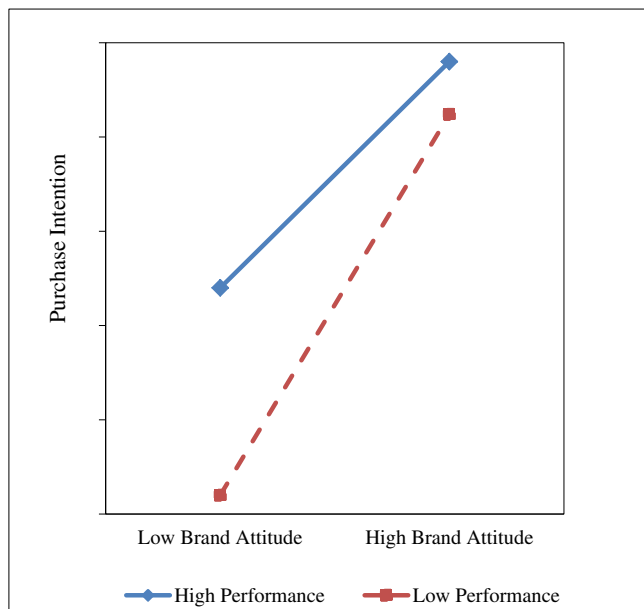


Fig. 2. Simple Slope Analysis of brand performance effects on purchase intention.

5. Conclusions

Based on the CBBE model developed by Aaker (1996) and extending the CBBE theory proposed by Keller and Lehmann (2006), this study investigates the relationship between CBBE and consumer responses to brands, which the literature rarely discusses in the luxury service setting (Huang & Cai, 2015). The results contribute to the development of a brand equity theory and an understanding of the theory's underlying mechanism but also provide valuable managerial and practical implications for international branding strategies and marketing communication and practices.

This study analyzes direct, indirect, and total effects of CBBE elements on purchase intention for luxury hotel brands with brand attitude as a mediator. First, the study provides evidence of CBBE's importance in influencing customer responses for luxury hotel brands beyond the commonly discussed product brands (Helm & Özergin, 2015). The study investigates effects of service-oriented CBBE on consumer responses, conducting multiple regression analyses. Results suggest that luxury hospitality service providers can generate positive customer responses by improving brand equity through different initiatives. Offering consumers integrated information about a brand from different aspects can enhance not only consumers' brand attitudes but also their behavioral intentions (Huang & Cai, 2015). Although studies regarding the effects of brand loyalty, brand quality, brand awareness, and brand image are inconclusive (Chang & Liu, 2009; Chaudhuri & Holbrook, 2001; Horng et al., 2012; Park et al., 2010), results of the current study are consistent with those of studies on CBBE, revealing that the four CBBE elements (brand loyalty, brand awareness, perceived quality, and brand image) are critical components of brand equity and collectively influence branding effectiveness (Aaker, 1996; Keller, 2003; Keller & Lehmann, 2006).

5.1. Theoretical implications

One can discern several implications for existing theory. First, although the literature on hotel market segmentation focuses on geographic, psychographic, or demographic differences, this study reveals that first time and repeat guests have different perceptions of specific brand equity dimensions (Gartner & Ruzzier, 2011). Results indicate that, compared with first-time guests, repeat guests of luxury hotels have a significantly higher perception of brand awareness and brand

loyalty, which might result in higher brand attitude and purchase intention.

Second, results provide possible explanations to reconcile conflicting observations regarding brand awareness or familiarity, and encourage additional investigation of the role of brand awareness in luxury hotel brands (Davis, Golicic, & Marquardt, 2008; Kim & Kim, 2005; Stahl et al., 2012). Some studies reveal that brand awareness is not a significant dimension of brand equity (e.g., Bailey & Ball, 2006; Kayaman & Arasli, 2007). Results of the current study are consistent with those revealed in business-to-consumer research, confirming that brand awareness is a major component of brand equity (Keller & Lehmann, 2006; Stahl et al., 2012). Similarly, consistent with studies on service branding in business-to-business research, the current study shows that brand awareness is imperative in driving brand equity (Davis et al., 2008). Although Huang and Cai (2015) indicate a significant and direct effect of brand awareness on purchase intention, the current study's results reveal a nonsignificant direct effect of brand awareness on purchase intention. However, an alternative mechanism of brand awareness effect on purchase intention operates through the mediating effect of brand attitude; therefore, the total effect of brand awareness on purchase intention is significant. This alternative mechanism combines the different results on brand awareness and highlights this effect more comprehensively.

Another contribution to the literature is the effect of each component of CBBE on brand attitude and purchase intention. By focusing on the direct, indirect, and total effects of each CBBE element on consumer responses, this study indicates their different effects on consumer responses. Brand awareness has a direct effect on brand attitude, but not on purchase intention. Enhancing customers' brand awareness and strengthening customers' perception of brand market performance can indirectly increase customers' purchase intentions. The study demonstrates that branding activities are not equally effective in the luxury hotel industry and their effects on different customer responses vary. Customers in emerging markets appear to focus more on affective attachment to the brand, which indicates the importance of customer relationship management in emerging markets. These different effects also implicitly indicate that interactive effects among equity elements or other variables may influence individual effects (Huang & Cai, 2015; Leone et al., 2006).

The indirect and weak influence of brand awareness on purchase intention supports the notion that the effects of CBBE on consumer responses may imply different mechanisms between service brands and consumer goods brands (He & Li, 2010). A consumer goods brand primarily relies on external communication to create brand value and relevance (de Chernatony, Cottam, & Segal-Horn, 2006), and brand awareness may be crucial to brand equity. However, the value of a service brand is highly dependent on the capability of staff members to fulfill the brand's promises (Nguyen & Leblanc, 2002). A brand's service promises not only claim superior/distinctive service quality but also facilitate the development of a strong brand image. Hence, in the CBBE model, brand awareness for a service brand may be less crucial than for a consumer goods brand.

Most importantly, results indicate that brand attitude directly influences customers' purchase intention. Although brand equity is a principal predictor of purchase intention, the causal relationship between brand attitude, introduced as a mediator, and purchase intention is even stronger. Using the information integration and attitude accessibility theories to explain mediating effects, this study contributes to branding theories by incorporating decision-making theories into the CBBE model. Results confirm that information associated with a brand is integrated into brand attitude for subsequent evaluations and behaviors (Simonin & Ruth, 1998). Appropriately integrating brand-related information in marketing communications and campaigns can maximize joint effects. Results highlight that market performance perception can be an additional cue of contextual information in consumers' evaluation process and influence the strength of their attitude on

purchase intention.

5.2. Managerial implications

This study considers an emerging market in a luxury hotel setting. Results provide practical guidelines for managers and marketers in the luxury hotel industry to balance their resources and efforts in marketing activities to improve marketing effectiveness. The mediating role of brand attitude between brand equity and purchase intention could help managers understand brand equity's role in consumers' evaluation and decision-making processes. The different effect of each CBBE element on different consumer responses indicates that marketing efforts on each aspect of CBBE must vary. Managers should provide more accurate estimations of marketing efforts and organize information input in a more integrated manner to facilitate message processing and attitude accessibility, which result in increased behavior intention. Results can assist managers in developing marketing strategies for branding high-end service providers and luxury hotels in the global market using a CBBE, and facilitate more efficient communications between marketing professionals and customers in the rapidly changing media environment. Results also reveal that repeat guests have significantly higher perceptions of brand awareness and brand loyalty, which can guide luxury hotels to evaluate their positions in relation to specific brand equity dimensions. Hotels may allocate more resources for first time guests to enhance their brand awareness and brand loyalty.

First, brand loyalty is specifically reflected in consumers' behavior, and this act is a repeat purchase behavior under the conditions of strong sensitivity. Luxury hotel guests who choose to stay at a hotel repeatedly and prioritize the hotel brand in their decision making are loyal toward that brand (Odin, Odin, & Valette-Florence, 2001). The hotel industry should customize brand experience to satisfy customers, stimulating loyalty toward the hotel brand. To motivate repeat guests, Banyan Tree Macau embroiders guests' names on bathrobes and places them inside the room's wardrobe before arrival. Ritz-Carlton enhances the customer brand experience by empowering employees to address guest needs by providing empathic and tailor-made services for each specific guest (Michelli, 2008). Personalized service and special care enhance the customer's repeat visits.

Second, brand awareness is the most critical dimension of brand equity when customers select a luxury hotel for the first time. Marketing tactics must consider brand awareness to attract customers and captivate potential customers' attention to ensure that they remember the brand. The importance of brand quality suggests that marketing managers in the luxury hotel industry must identify the source of service quality and strive to satisfy customers' needs and wants. Similarly, the importance of brand image in the luxury hotel industry implies that marketing managers must ensure adequate provision of existing facilities and maintain the physical environment for their customers. These hotels must upgrade their visual appeal periodically to develop a positive, strong brand image among customers. Such considerations strengthen consumers' brand equity and assist firms in developing a positive attitude toward their brands, increasing purchase intention for their brands.

Third, brand performance plays an important role in consumers' purchase intention. The negative moderating effect indicates that high brand performance alters the positive effect of brand attitude on purchase intention. Marketing managers in the luxury hotel industry should enhance their consumers' attitude toward the brand. However, because the brand attitude effect is more acute for low brand performance hotels, marketing initiatives will be more cost effective in promoting guest loyalty in such hotels. Hotels that enjoy limited favorable brand attitude can mitigate negative brand image by exceeding guest expectations through excellent service offerings and performance. They can benchmark and imitate hotel chains such as Marriott, Hyatt, and Hilton, which consistently rank among the top hotels per the American customer satisfaction index (2016).

5.3. Limitations and future research directions

Several limitations exist. With respect to the research model, this study did not use longitudinal data to test the causal relationship between brand equity elements and brand attitude. Several studies report varying relationships among these factors (e.g., Horng et al., 2012). The convenience sampling method suffers from common methods bias (CMB) and nonresponse bias. Future research can use the objective value of brand performance to eliminate the CMB issue. Second, attitude-related research has suggested that in the context of service experience, the pre-attitude influences the post-attitude. Future research can study the dynamic effects of attitude in a more extensive CBBE model. This study provides observations that link a market variable with consumer variables in CBBE literature, proposing a research direction by adding contextual effects to the CBBE model and accounting for situational factors using a multilevel design. This study is restricted to the luxury hotel industry of one geographic area. Future studies can replicate this study in a different area with various service brands to determine generalizability. Finally, future studies can integrate more contextual factors, such as competition intensity and firm corporate social performance, into this model. Since the sample of respondents is composed of tourists, results may not be applicable to other consumer groups such as business travelers. Future studies can investigate the relationship between CBBE model and various consumer groups.

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Matthew Tingchi LIU, Faculty of Business Administration, University of Macau, Avenida da Universidade, Taipa, Macau, China, email: MatthewL@umac.mo.

IpKin Anthony WONG, Faculty of International Tourism and Management, Av. Padre Tomas Pereira, City University of Macau, Macau, China, email: anthonywong@cityu.mo.

Ting-Hsiang TSENG, Department of International Trade, Feng Chia University, No. 100, Wenhua Road, Xitun District, Taichung City, Taiwan 407, email: tsength@mail.fcu.edu.tw.

Angela Wen-Yu CHANG, Faculty of Social Science, University of Macau, Avenida da Universidade, Taipa, Macau, China, email: WYChang@umac.mo.

Ian PHAU, School of Business, Curtin University, Kent St, Bentley WA 6102, Australia, email: Ian.Phaus@cbs.curtin.edu.au.

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- Matthew Tingchi Liu**, Ph.D. is Associate Professor of Marketing, University of Macau. He published papers in *Marketing Letters*, *Journal of Business Research*, *International Marketing Review*, *European Journal of Marketing*, *Industrial Marketing Management*, *Journal of Services Marketing*, *Journal of Consumer Marketing*, *Asia Pacific Journal of Marketing and Logistics*, *Journal of Hospitality & Tourism Research*, *International Journal of Contemporary Hospitality Management*, *International Journal of Mobile Communications*, among others. Before joining academia, he worked for *Ernst & Young* as consultant.
- IpKin Anthony Wong**, Ph.D is Associate Professor and Institute of Tourism and Gaming Deputy Director, Faculty of International Tourism and Management, City University of Macau. He spent more than ten years in the United States and received a B.S. in computer science and general business at the University of Central Oklahoma, M.S. in computer science at Oklahoma State University, MBA (emphasis in marketing) and PhD in communication and information sciences at the University of Hawaii at Manoa. He has taught courses in the fields of information systems, marketing, and decision science at Oklahoma State University, the University of Hawaii, Macau University of Science and Technology, and IFT. He has published more than 110 peer reviewed articles in scholarly journals and conference proceedings (46 journal articles with 33 SSCI listed, 6 book chapters, and over 60 conference papers). His articles appeared at *Journal of Business Research*, *Journal of Services Marketing*, *Journal of Service Management*, *Tourism Management*, *Journal of Travel Research*, *International Journal of Hospitality Management*, *Cornell Hospitality Quarterly*, *Journal of Hospitality & Tourism Research*, *Journal of Travel & Tourism Marketing*, *International Journal of Contemporary Hospitality Management*, and more. He is currently serving as a coordinating editor of the *International Journal of Hospitality Management*. He also serves as an editorial board member for *Cornell Hospitality Quarterly*, *International Journal of Contemporary Hospitality Management*, and among three other journals.
- Ting-Hsiang Tseng**, Ph.D. is Associate Professor of Department of International Trade, FengChia University. He focuses on service marketing and publishes on *International Marketing Review*, *Journal of Services Marketing*, *International Business Research*, *Asia Pacific Journal of Marketing and Logistics*, and so on. Dr. Tseng received his doctoral degree from City University London, UK.
- Angela Wen-Yu Chang**, Ph.D. is Assistant Professor of Communication Department, University of Macau. Her work has appeared in *Journal of Advertising*, *Modern Advertising*, *Journal of Communication Research*, *Budapest Management Review*, *The International Journal of Communication and Health* and so on. Dr. Chang also authored 3 books about advertising and obesity issues. Dr. Chang obtained her Master degree from New York Institute of Technology (USA) and doctor degree from Union Institute and University (USA).
- Ian Phau**, DBA, is Professor of Marketing, Curtin University, Australia. His work has published in *Journal of Advertising*, *European Journal of Marketing*, *Journal of Marketing Management*, *Journal of Business Ethics*, *Psychology & Marketing*, *Journal of Consumer Marketing*, *Journal of International Consumer Marketing*, *International Journal of Bank Marketing*, *Journal of Marketing Channels*, *Marketing Intelligence and Planning*, *Australasian Marketing Journal*, *Journal of Vacation Marketing*, *Journal of Brand Management*, *Journal of Promotion Management*, *Young Consumers*, *Journal of International Consumer Marketing*, *Asia Pacific Management Review*, *International Journal of Contemporary Hospitality Management*, and so on. Prof. Phau is also the editor-in-chief of *Asia Pacific Journal of Marketing and Logistics* (Emerald).