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Casino marketing, problem gamblers or loyal customers?

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ABSTRACT

This paper draws upon the research gap identified in the current gaming literature, investigates the relationships among the commonly practiced customer acquisition and retention strategies in casinos, gambling behaviors, customer loyalty and problem gambling. In particular, the study examines the mediating role of gambling behaviors in the relationship between the strategies and problem gambling or customer loyalty. Gambling behaviors selected for this testing are length of stay, gambling frequency and budget, and average betting. These behaviors and the relevant criteria are consistent with those applied in casinos to assess customer profitability and lifetime value. This investigation involves two studies and was undertaken at 30 major casinos in the gaming capital Macau. The first study aims to identify customer acquisition and retention strategies in casinos and the second is focused on hypotheses testing. Results from testing the hypotheses using various statistical techniques in the second study confirm some proposed relationships and fail to support others. The findings have significant implications for the relevant literature as well as for practitioners.

1. Introduction

Gambling research has become prevalent along with rapid expansion of the casino industry across various regions. Two major streams are evident in the relevant literature. One theme is approached from business and management perspective and focused on growth and sustainability of gaming related industries and organizations. Research immersed in this theme involves discussion around service profit chain in the casino industry, analysing the relationships among various casino strategies and customer loyalty and retention. For instance, drawing upon Asian gamblers and casinos in Asia, gaming research led by Wong and colleagues (e.g., Wong, 2013; Wong & Dioko, 2013; Wong & Fong, 2010), Lam and colleagues (e.g., Lam, 2007; Lam & Mizerski, 2009), and Prentice and colleagues (e.g., Prentice, 2013, 2014; Prentice, King, & Ohtsuka, 2012; Shi, Prentice, & He, 2014; Zeng & Prentice, 2014) approach customer (gambler) loyalty and retention analysis from gambling motivation, casino service, customer equity and loyalty program. On the basis of Las Vegas casinos, a plethora of research in the similar field has been published by Lucas and his colleagues (e.g., Lucas, 2003; Lucas, Dunn, & Karitonova, 2006). The other stream is centred on problem and responsible gambling. Studies on this theme have analysed causes of problem gambling and proposed remedies and treatment from psychological and sociological perspectives (e.g., Abbott & Clarke, 2007; Davidson & Rodgers, 2011; Dickson Gillespie, Rugle, Rosenthal, & Fong, 2008; Welte, Barnes, Tidwell, & Hoffman, 2011; Williams, Volberg, & Stevens, 2012).

Like any other businesses, a casino's viability is primarily dependent upon its competitive advantages and ability to attract and retain customers, which, from marketing perspective, can be achieved by appropriate blend of customer acquisition and retention strategies. Initially casinos would employ various aggressive promotions including complimentary service, good Fengshui and offering cash back on the basis of theoretical win (acquisition strategies) to acquire customers. Once attracting their visit and gambling at the casino, casinos monitor and record their gambling behaviors. The employees would selectively approach the customers/gamblers who demonstrate potential to be profitable to the casino and offer them with various incentives or loyalty programs (retention strategies) with intention to attract their return.

However, as the nature of gambling is prone to incurring addiction on gamblers, the process of acquiring and retaining customers, unlike other industries, may generate problem gamblers. Customer (gambler) loyalty and retention could be interpreted as relevance to gambling addiction or problem gambling, as customer retention is often measured by gambler visiting frequency to the gaming venue. Consequently, the acquisition and retention strategies employed by most casinos may be perceived as negative influence on gambling problems. Though very small percentage of gamblers are identified as having gambling problems, implications generated from problem gambling research can be rather contrasting to those from marketing and managing research in this field. To date very few studies have combined the two streams and propose an integrated framework that examines the role of casino

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strategies on gambling behaviors and problem gambling. In light of this gap, this study examines the effect of commonly practiced marketing strategies by casinos, and investigates the relationships among casino marketing strategies, gambler loyalty and behaviors, and problem gam bling. To accomplish the aim, the following section discusses the rele vant literature and offers hypotheses. Methodology is outlined to test the hypotheses. Subsequently data analyses and results are presented. Discussion and proposed implications of the research findings conclude this paper.

2. Literature review

2.1. Casino strategies effects

Casino marketing efforts involve two general approaches: customer acquisition and retention. Customer acquisition focuses on acquiring new customers and achieving optimal marketing share. Common strat egies include bus programs and various aggressive promotions such as complimentary chips, food & beverage vouchers, and discounted rate for hotel rooms (see Prentice, 2013). Cash back, which is based on the customer's theoretical loss, is another commonly practiced acquisition strategies in casinos. When the market begins to saturate and competi tion intensifies, customer loyalty and retention becomes the preferred approach to marketing. Popular retention strategies are loyalty pro grams and the relevant complimentary rewards, which differ from the above mentioned complimentary services and are focused on stimulat ing gambler patronage and revisit. These programs and associated rewards involve tiered memberships, free valet parking, meals, hotel stays, and airfare. For the high roller or premium market, some casinos deploy various tournaments such as Baccarat or golf tournament to en tice their revisit. To determine the specific acquisition and retention strategies, the following study was undertaken to generate appropriate items to measure these strategies.

3. Study one

3.1. Method

A systematic scale development process based on Churchill (1979) was taken to generate items measuring casino acquisition and retention strategies. Prior to the current study, a series of semi structured in depth interviews were conducted to understand how different casino strategies attracted gamblers. The interview questions include: "What motivates you to gamble?" "What attracts you to gamble in a specific casino?" "What are some casino service offerings do you like?" A total of 75 gamblers participated in the field study. The interviews took place at several casino properties in Macau the world's gambling cap ital with gambling revenue atop the world (USD $45.2 billion in 2013 or about seven times of the gambling revenue generated from the entire Las Vegas). Each interview lasted for about 20 min. The interview verba tim was translated into English. The data was analyzed through open coding in which the researchers read the verbatim transcript line by line. In vivo, constructed codes were organized into categories with ref erence to the literature (Bigelow, 2007; Rosenbaum, Ostrom, & Kuntze, 2005; Wan, 2011; Wong, 2013; Wong & Wu, 2013).

The items generated through the interview were carefully examined and analyzed by a panel of researchers who have expertise in the rele vant area. As a result, 11 items are retained. Each item was evaluated using a 7 point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). A further self administered survey using these items was conducted with casino customers in Macau. A filter question was raised to ensure that the respondents did gamble in the corresponding casino. The prospective respondents were intercepted at the exit of major casinos in Macau.

A total of 321 complete responses were retained. Of the respondents, 58.6% were males; 36.4% between the age of 21 and 30, and 26.2% between the age of 31 and 40; 33.6% had a bachelor degree or above while 34.9% received up to high school education; 48.0% were from main land China, 15.3% were from Hong Kong, and 27.7% were local residents.

3.2. Results

To assess the dimensionality, validity, and reliability of the scale we randomly split the dataset into two sub samples, we conducted explor atory factor analysis using the first sub sample and confirmatory factor analysis using the second sub sample. Results presented in Table 1 indi cate that the set of items explains 68.13% of the variance of the scale and could be reduced into three factors: Fengshui, complimentary service and loyalty program. The items that indicate location of the casino, easy access to gambling fund were merged into Fengshui variable. How ever, for the purpose of this study, we still use Fengshui as the label hereafter that includes the items indicating location and money access.

The scale demonstrates adequate convergent and discriminant validities with all primary loadings $\geq .63$ and secondary loadings $< .30$, average variance extracted (AVE) $\geq .50$, and the square of the correlation for each pair of factors is less than the variance extracted for each factor. The Cronbach alpha values and composite reliabilities for all factors are more than .74. The measurement model of the scale demonstrates ade quate fit between the data and the implied model: comparative fit index (CFI) = .97, root mean square error of approximation (RMESA) = .08, and root mean square residual (SRMR) = .04. Consistent with these findings, complimentary service, Fengshui and loyalty program are adopted as customer acquisition and retention strategies for this paper. The following section presents the relevant literature review involving the proposed model and form hypotheses on the basis of the proposed relationships.

3.3. Hypotheses formation

3.3.1. Complimentary service effects

Complimentary services or comps are one of the popular customer acquisition strategies that casinos use to encourage gamblers or players to visit the casino and gamble. Casinos at different locations or regions vary on their offerings, depending on factors such as market situations

Table 1
Scale items for casino service strategy.

	Factor loading	Cronbach's alpha	Composite reliability	AVE
Fengshui		.82	.83	.50
The casino has good Fengshui	.63			
The casino brings me luck	.81			
I could win money from the casino	.83			
The casino's location is convenient	.52			
The casino allows easy access of money	.83			
Complimentary service		.74	.78	.54
The casino offer good shuttle services	.68			
There are ample complimentary entertainment facilities	.85			
There are free food and drinks for me while gambling	.80			
Loyalty program		.89	.88	.72
The loyalty program allows me to enhance my social status	.89			
The loyalty program has many options for me to redeem my points	.75			
The loyalty program gives me special privilege	.92			

Note: Total variance explained = 68.13%.
Kaiser–Meyer–Olkin measure of sampling adequacy = .83 and Bartlett's test of sphericity: $\chi^2_{(55)} = 684.52$, $p < .001$.
Model fit statistics: $\chi^2/df = 2.79$, comparative fit index (CFI) = .97, root mean square error of approximation (RMESA) = .08, root mean square residual (SRMR) = .04.
All factor loadings are significant at the .001 level.
AVE = average variance extracted.

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and competition. For instance, casinos at Genting Highlands in Malaysia were less aggressive in their promotions prior to casino establishments in Singapore, the Philippines and Macau. In a competitive environment such as casinos in Las Vegas and Macau, complimentary offerings be come more generous and competitive in order to encourage gamblers to visit a specific casino as their first choice. Some casinos offer free drinks to anyone who is gambling.

On the basis of their average betting volume and time during the same visit, free meals or hotel rooms may be offered. When the betting reaches to that of the high roller level, the comps may be upgraded to a higher service standard such as dining in VIP rooms and staying in suites, villas or presidential suites (Rubin, 2001). Casinos often endeavor to develop a long term relationship with one time high rollers by offer ing personal service through casino hosts or marketing executives, air fare reimbursement, limo rides to shopping mall or the airport, tickets to shows, golf, free concierge services, cash back, private gaming areas, and private jet service (Prentice, 2013). Some casinos even provide prostitution services or cash back for high rollers (Grochowski, 2013). Casinos award comps based on a player's theoretical loss. The theoreti cal loss is the amount of money a player is expected to lose based on the long run statistical advantage the casino has on the particular game being played. These promotions and differentiated offerings naturally encourage visitors' gambling behaviors at the casino and subsequently increase their betting volume and length of stay in order to enjoy premi um services. Hence, the following hypothesis is made:

H1. Complimentary service is positively related to gambling behaviors.

3.3.2. Fengshui effects

Fengshui is the ancient art of placement to achieve health, wealth, love and prosperity, and an extension of Chinese astrology. It is ranked above virtues and education to achieve prosperity in Chinese culture although luck and destiny are considered more important. Fengshui has become a means to attracting Asian gamblers' visit and retention. Although popularly practiced in many casinos, very little research has been undertaken to invest its effects on gambler behaviors.

Despite the debate on its scientific proof, Fengshui has become a pop ular phenomenon in casinos in Asia as well as in some parts of the West ern world. For instance, the big golden tree in Wynn Macau is regarded as Tree of Prosperity. The casinos of Las Vegas have some of the most invit ing entrances which appear to be full of energy and enticement in the in dustry: the fountains of Bellagio, the pirates frolicking with explosions and fire in front of Treasure Island, or volcanoes erupting as you enter the Mirage. The Indian casinos went one step further, and used astrology as part of their theme in the design of their casinos. For instance, the Gold en Moon at Pearl River Resort in Choctaw. Mississippi has a big full golden moon on the top of their casino. Some casinos use their corporate charts to choose a day that has good aspects to open their casino to the public.

In addition to the belief of bringing good fortune for casinos, Fengshui is supposed to entice gamblers' visit and patronage too. The MGM Grand in Las Vegas spent millions of dollars to remove the mouth of lion at the entrance as gamblers believe walking into that giant mouth is bad luck. Gamblers who have lost a fortune over the years at Stanley Ho's Lisboa blame the bird cage shaped casino. With debut and induction of international casino operators in Macau, Lisboa's patrons swiftly switched to those who appear to have good Fengshui and bring them luck. To some extent, Fengshui does affect gambling be haviors. Consistent with this view, the following hypothesis is offered:

H2. Fengshui is positively related to gambling behaviors.

3.3.3. Influence of complimentary service and Fengshui on problem gambling and customer loyalty

Although complimentary services and Fengshui are common acquisi tion approaches used to acquire customers, the ultimate goal of attracting new customers is to achieve customer loyalty and retention though a process of acquiring and establishing relationship with customers who demonstrate potential for becoming profitable clients for the firm (Prentice & King, 2011). Customer acquisition is the initial stage of this process. Casinos make every endeavor such as offering complimentary services and creating an impression of good Fengshui for Asian gamblers to attract customers to visiting their premises and gambling in order to achieve optimal market share.

During their stay and playing in the property, casino frontline employees (e.g. pit bosses, hosts and marketing executives) monitor and observe players' gambling behaviors how much the customer has checked in, what is his or her average betting, how long has he or she been playing. On the basis of these behavioral data, the employees selectively approach the gamblers who likely become premium players based on the criteria set by the casino, invite them for a friendly chat or drink, and offer them various incentives such as free or upgraded accommodations with intention to establish a relationship with them and to attract their return. Subsequently, the marketing executives would contact those who have expressed interest to revisit the casino. In some cases, the executives may pay personal visit to the gamblers who demonstrated high end gambling behaviors (large betting and long playing hours). This process ultimately attracts some gamblers' patronage and loyalty. Hence, the following hypotheses are made:

H3a. Complimentary service influences customer loyalty through the mediating role of gambling behaviors.

H3b. Fengshui influences customer loyalty through the mediating role of gambling behaviors.

Like any other business, the acquisition retention process is a typical marketing approach to improving customer patronage and loyalty, as suggested in the relationship marketing literature. However, in the gam bling context, patronizing the casino frequently for the purpose of gam bling may lead to gambling addiction and ultimately problem gambling. There are various definitions of problem gambling in the literature. One of the common characteristics of problem gambling is gamblers' compul sion to gamble (e.g., Gould & Sanders, 2008; The Ministerial Council on Gambling, 2005; Vorvick & Rogge, 2014). Such compulsion is attributed to a strong desire to win or to win back what has been lost which is iden tified as one of the gambling motivations (Lam, 2007; Lee, Chae, Lee, & Kim, 2007; Neighbors, Lostutter, Cronce, & Larimer, 2002). Hence, these acquisition strategies ultimately have an influence on problem gambling; and thus, gambling problem is caused by compulsive gambling behaviors. Consistent with this view, the following hypotheses are offered:

H4a. Gambling behaviors intervene between complimentary services and problem gambling.

H4b. Gambling behaviors intervene between Fengshui and problem gambling.

3.3.4. Loyalty program effects

Loyalty program is designed to stimulate short term profits and long term loyalty for the firm through offering customers discounts, free goods, cash, or special services (Berman, 2006). These programs are widely used in the gaming industry and extensively discussed in the gaming literature (e.g., Barsky & Tzolov, 2010; Shi et al., 2014). Although loyalty programs are designed to attach customer loyalty, research findings on the effectiveness of these programs are inconsis tent and inconclusive (Barsky & Tzolov, 2010; Crofts, 2011). Huang, Chen McCain, and Tie (2008) indicate that casino loyalty programs have no direct effect on customer loyalty. However, Barky and Tzolov found that effectiveness of casino loyalty programs is dependent upon customer segments. For instance, the programs are very effective for elite elders but not for unmoved members. Such inconsistency warrants further evidence on this relationship.

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Like any other industries, casino loyalty program is often point based, through which each play level equates to a certain percentage of tangible incentives, or cash back rewards (Meczka, 2010). With an advanced customer relationship management program, casinos may utilize loyalty programs to segment customers into different tiers on the basis of demographic, psychographic and performance information (Dowling & Uncles, 1997). They are also able to operationalize player data to reward specific consumer segments. Customers are rewarded with tiered services and offerings according to their profitability level with the firm and lifetime value. Tiered loyalty programs are linked to membership cards. These cards are used to swipe at all selling points within the casino premises and rewarded with redeemable points. Customers can use these points to redeem for gift vouchers or accom modations. There are different types and tiers of cards. Depending on various factors including purchasing frequency and volume, for in stance, cards are divided into platinum, gold, silver, and green tiers (see Prentice et al., 2012). Accordingly, services provided to card holders are different: customers in higher tier receive more premium services.

Tiered loyalty programs help firms (casinos) optimize use of organi zational resources and allow the firm to provide differentiated rewards for each tier and ensure that the top tier customers receive premium in centives (McCall & Voorhees, 2010). The tiered structure is also claimed to appeal to human need for achievement (see Kilby & Lucas, 2008). Although they are specifically designed to attract customer loyalty and retention, tiered players are compelled to increase their gambling be haviors in order to get promoted to the next tier or to maintain their current level since they are re evaluated on a regular (often annual) basis (Palmer & Mahoney, 2005). Consequently customers on the top tier have a sense of prestige which prompts them to maintain such status by enhancing their gambling behaviors. While performing these behaviors, though every service encounter with the casino and casino frontline employees, customer loyalty may be developed. Consistent with the foregoing discussion, the following hypotheses are made:

H5. Loyalty program is positively related to gambling behaviors.

H6. Loyalty program has a direct and an indirect effect with gambling behaviors as the mediator on customer loyalty.

While maintaining prestige status, these rewards may stimulate gamblers' spontaneity in visiting a casino and increasing gambling frequency and betting volume. These behaviors ultimately have an effect on gambling addiction, hence problem gambling is induced. Similarly, customer loyalty is indicative of gamblers' commitment to the casino (Baloglu, 2002). Either behaviorally or emotionally, such commitment may be increased and turned into attachment to gambling, and ultimately into addictive gambling. Hence, the following hypotheses are offered:

H7a. Loyalty program has an indirect effect on problem gambling with customer loyalty as the mediator.

H7b. Loyalty program has an indirect effect on problem gambling with gambling behaviors as the mediator.

These hypothesized relationships are depicted in Fig. 1.

4. Study two

4.1. Method

4.1.1. Sample and procedure

The second study was also undertaken at 30 Macau casinos and by a group of experienced field investigators. To reduce non response bias, systematic sampling was used. The investigators intercepted every third patrons at the exit of each survey casino. Filter questions were raised to ensure that respondents had just gambled in the correspond ing casino. All respondents were 21 or older. The questionnaire was originally developed in English and translated in Chinese based on the back translation method by a group of bilingual researchers.

A total of 300 completed responses were obtained. A response rate of 56% was achieved. Of the respondents, 65.3% were males and 34.7% fe males; 20% were between the ages of 21 to 30, 48% between the ages of 31 to 40, and 25% between the ages of 41 to 50; 44% received up to senior high school education while 31% received a bachelor or higher education; 91% were mainland Chinese tourists and 9% were Hong Kong tourists.

4.1.2. Measures

Gambling behavior was assessed by four commonly used measures (Baloglu, 2002), namely, length of stay in the casino, gambling frequen cy in the casino (in the last three years), gambling budget, and average bet size. *Gambler loyalty* was measured by customer willingness to re turn to the survey casino, to recommend and spread positive word of mouth communication for the casino. The variable is evaluated using a ratio scale (e.g., "Relative to other casinos, how likely will you go to this casino the next time when you gamble in Macau?"). According to Baloglu (2002), relative or comparative loyalty is a more desirable mea sure of gambler loyalty because "it makes more sense ... to examine purchases for one brand in relationship to others" (p. 50). *Problem gambling* was measured by the 9 item problem gambling severity

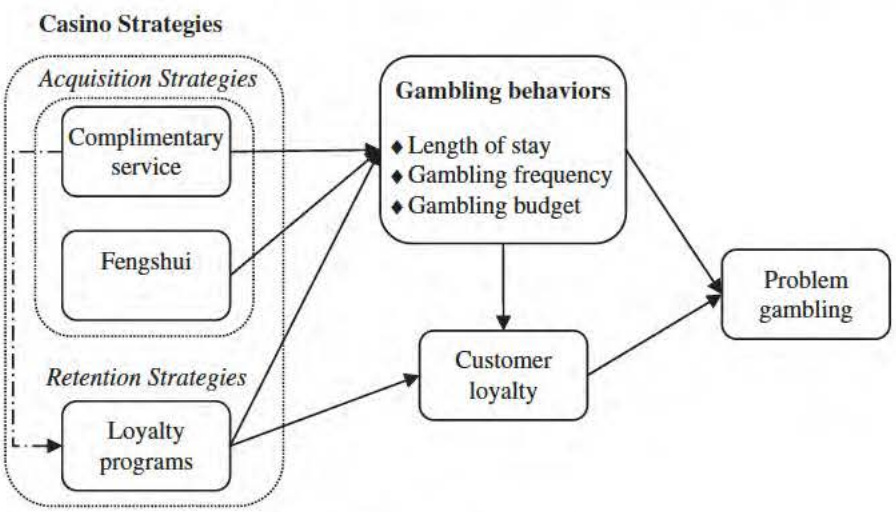

Fig. 1. The research framework.

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index (PGSI) developed by Ferris and Wynne (2001). Each item was measured by a 5 point scale ranging from 1 (never) to 5 (almost always).[2] The scale is reliable with the Cronbach's alpha (α) value of .82.

4.1.3. Data analyses

Since the data was collected from a single source, we diagnosed common method bias (CMB) using the single factor method. Results show that $\chi^2/df = 7.02$. We further diagnosed CMB by introducing a four item customer orientation scale based on Camarero and Garrido (2012) as a maker variable to the proposed framework. Results show that the variable does not have significant effect on the proposed rela tionships, suggesting that CMB is not a major issue in the study. We di agnosed multicollinearity by assessing the variance inflation factor (VIF). Results indicate that no VIF is greater than 2.0, suggesting that multicollinearity is not a limitation of the study.

4.2. Results

Table 2 presents descriptive statistics and zero order correlations of the variables of interest. On average, respondents visited the sampled casino about once per year and stayed in the casino for about 1.9 h per trip. Their average gambling budget was USD $1194 and the average betting size was USD $62.95. There were 68.79% of respondents who expressed willingness to return to the same casino in the future.

Structural equation modeling was deployed to test the proposed framework and hypotheses. Results of the parameter estimations are presented in Table 3. H1, H2, and H5 propose a relationship between three types of casino strategies and gambling behaviors. Results show that Fengshui ($\gamma = .12$, $p < .10$), complimentary service ($\gamma = .13$, $p < .10$), and loyalty program ($\gamma = .20$, $p < .05$) are significantly related to gambling frequency. Fengshui is also significantly related to gambling budget ($\gamma = .17$, $p < .05$) and average bet size ($\gamma = .17$, $p < .05$); partially supporting H1, H2, and H5.

H3a and H3b postulate a mediating effect of gambling behaviors on the relationship of complimentary services and Fengshui on customer loyalty, while H6 proposes a direct and indirect relationship between loyalty programs and customer loyalty through the mediating role of gambling behaviors. Results in Table 3 reveal that gambling frequency ($\beta = .14$, $p < .05$), gambling budget ($\beta = .14$, $p < .05$), and average bet size ($\beta = .11$, $p < .10$) have significant direct relationships with custom er loyalty. They further indicate that loyalty program ($\beta = .15$, $p < .05$) is directly related to the dependent variable. We tested the mediating ef fect using Baron and Kenny's (1986) mediation procedure and the Sobel test. Results reveal that gambling frequency partially mediates the rela tionship between loyalty programs and customer loyalty ($Z = 1.92$, $p < .10$) and gambling budget partially mediates the relationship between Fengshui and customer loyalty ($Z = 1.90$, $p < .10$). The results partially support H3b, fail to support H3a, and mostly support H6 (gam bling frequency is the only significant mediating factor).

Following the finding, we conducted post hoc analyses to test if customer acquisition and retention strategies have hierarchical effects on customer loyalty. This testing involves a mediation model with loyalty program as the mediator on the relationship of Fengshui and complimentary service with customer loyalty. We modeled this mediat ing effect using SEM by including the additional paths leading from Fengshui and complimentary service to loyalty program to the pro posed framework depicted in Fig. 1. Results show that Fengshui ($\gamma = .17$, $p < .05$) and complimentary service ($\gamma = .22$, $p < .01$) are significantly related to loyalty program ($R^2 = .11$). Following the proce dures mentioned above, we find that loyalty program has a significant mediating effect on the relationships of Fengshui customer loyalty (Sobel test: $Z = 1.66$, $p < .10$) and complimentary service customer loy alty ($Z = 1.92$, $p < .10$).

Next, we examined H4a, H4b, H7a and H7b which suggest a mediat ing role of gambling behaviors and customer loyalty on the relationship between the casino strategies and problem gambling. Results in Table 3 reveal that length of stay in a casino ($\beta = .28$, $p < .001$) and gambling budget ($\beta = .31$, $p < .001$) are significant and positively related to prob lem gambling. We then followed the procedures described above to test the mediating effects. The results show that only gambling budget ($Z = 2.08$, $p < .05$) fully mediates the relationship between Fengshui and problem gambling; partially supporting H4b, but not H4a. The results also fail to support H7a and H7b when gambling behaviors are controlled. We further examined the total (sum of direct and indirect) effects of the independent variables on the dependent variables. The results suggest that the total effects of Fengshui ($\gamma = .07$, $p < .05$) and loyalty program ($\gamma = .17$, $p < .01$) on customer loyalty are significant, while only the total effect of Fengshui ($\gamma = .10$, $p < .05$) on program gambling is significant.

In addition, the total effects of length of stay ($\gamma = .28$, $p < .001$), gambling budget ($\gamma = .32$, $p < .001$), and average bet size ($\gamma = .11$, $p < .10$) on problem gambling are significant. The proposed model shows adequate model fit with CFI = .94, RMSEA = .07, and SRMR = .08. We tested several competing models by excluding the relationship between gambling behaviors and customer loyalty or including the relationship between gambling behaviors and problem gambling, or including the direct relationship between casino strategies and prob lem gambling. The results consistently suggest that the proposed model has the best model fit (e.g., lowest AIC = 654.78) and is most parsimonious.

On the basis of the influence of Fengshui on problem gambling, we performed additional analyses to explore the direct effect of Fengshui on various levels of problem gamblers. In this testing, each Fengshui item was opted for in order to provide a better understanding the effects. The level of problem gambling was classified into four groups using Ferris and Wynne's (2001) criteria: non problem gamblers (Non PGs) (7.7%), low level problem gamblers (low level PGs) (18.0%), moderate level problem gamblers (moderate level PGs) (42.7%), and high level problem gamblers (high level PGs) (21.7%). To test whether casino strategies predicts the type of PGs, we conducted a series of multi nominal logistic regressions. Results from Table 4 reveal that comparing to other PG groups (i.e., low level and moderate level PGs) high level PGs are significantly more likely to be attracted by three Fengshui: previous winning in a casino ($e^{\beta} \leq .85$, $p < .10$), a con venient location ($e^{\beta} \leq .76$, $p < .05$), and allow easy access of money ($e^{\beta} \leq .78$, $p < .05$).

Table 2
Means, standard deviations, and correlation matrix.

	Mean	S.D.	1	2	3	4	5	6	7	8
1. Fengshui	4.71	1.14								
2. Complimentary service	5.04	1.23	**.36**							
3. Loyalty program	5.17	1.28	**.32**	**.26**						
4. Customer loyalty	68.79	18.46	**.30**	**.34**	**.16**					
5. Length of stay[a]	1.88	1.43	.01	.08	.06	.09				
6. Gamble frequency	3.39	3.59	**.23**	**.20**	**.23**	**.22**	**.29**			
7. Gamble budget(ln)[b]	8.15	1.41	**.12**	.00	.03	**.22**	**.56**	**.29**		
8. Average bet size(ln)[b]	5.66	.91	.07	.02	.01	**.15**	**.41**	**.21**	**.60**	
9. Problem gambling	2.20	.62	**.15**	.02	.01	**.16**	**.22**	**.28**	**.37**	**.21**

Note: Correlations that are significant at or below the .05 level are in bold.
[a] Measure is hours.
[b] Log transformed.

[2] The original scale used a 4-point anchor: 1 (never), 2 (sometimes), 3 (most of the time), and 4 (almost always). However because Chinese tented to avoid answering ex-treme values, we introduce a new anchor – rarely – between never and sometimes. Our qualitative study (see below) also supports our decision in that some respondents indicate they rarely experience some of the problem gambling traits. Another reason we used a 5-point scale is because the literature suggests that interval scale items should have five or more anchors.

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Table 3
Results of regression estimates of customer loyalty and gambling behaviors.

	Length of stay	Gambling frequency	Gambling budget(ln)	Average bet size(ln)	Customer loyalty	Problem gambling
Main effects						
Fengshui	.10	.12†	.17*	.14†		
Complimentary service	.08	.13†	.07	.04		
Loyalty program	.08	.20**	.01	.06	.15*	
Length of stay					.06	.28***
Gambling frequency					.14*	.00
Gambling budget (ln)					.17**	.31***
Avg. bet size (ln)					.11†	.10[a]
Customer loyalty						.10
R^2	.02	.12	.02	.02	.10	.21

Parameter estimates are standardized.
Fit statistics: $\chi^2/df = 2.47$, comparative fit index = .94, room mean square error of approximation = .07, standardized root mean square residual = .08.
[a] Although its direct effect is not significant, its total effect (the sum of direct and indirect effects) is significant at the .05 level.
† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

These relationships are depicted in Fig. 2a c. The figures illustrate that the estimated probabilities of low level and moderate level PGs decline while the probability of high level PGs increases as a function of the corresponding Fengshui effects. The estimated probability of non PGs remains about the same regardless of the perceived intensity of these strategies. The results suggest that as non PGs are not directly affected by Fengshui strategies, but low level and moderate level PGs are more likely to develop into high level PGs under Fengshui influence, namely previous winning, a convenient location, and easy access to gambling fund.

Next, the relationship between loyalty membership and problem gambling was tested. The sample was divided into three groups on the basis of their loyalty membership status, namely, no membership (40%), basic (43.7%), and premium (16.3%). Results presented in Table 5 indicate a significant relationship between the two variables ($\chi^2_{(6)} = 12.9, p < .05$). Non PGs are more likely to have no (21.7%) or basic membership status (18.3%). The percentage of different member ship status for low level (about 15.8% 19.8%) and high level PGs (about 38.9% 47.5%) are similar. However, high level PGs are more likely to have premium membership status as shown in Fig. 3.

5. Discussion and conclusions

Drawing upon the identified research gap in the gaming literature, this study adopts the commonly practiced customer acquisition and re tention strategies in casinos and investigates the relationships among these strategies, gambling behaviors, customer loyalty and problem gambling. In particular, the study examines the mediating role of gam bling behaviors in the relationship between the strategies and problem gambling or customer loyalty. Customer acquisition strategies examined in this investigation are focused on complimentary service and Fengshui, whereas retention strategies on casino loyalty programs. Gambling behaviors selected for this testing are length of stay, gambling frequency and budget, and average betting. These behaviors and the relevant criteria are consistent with those used in casinos to assess customer profitability and lifetime value. On the basis of reviewing the relevant literature, the conceptual model is presented and hypotheses are formed for testing. Results from testing the hypotheses using various statistic techniques confirm some proposed relationships and fail to sup port others. The findings have significant implications for the relevant literature as well as for practitioners. Discussion of these findings is detailed as follows.

Table 4
Results of multinominal logistic regression of casino strategy on gambler group.

Casino strategy items	Gambler group	β	Odds ratio (e^{β})
Previous winning at the casino	Non-problem	.14	.87
	Low level	.18†	.84
	Moderate level	.16†	.85
The casino's location is convenient	Non-problem	.11	.89
	Low level	.32*	.73
	Moderate level	.28*	.76
The casino allows easy access to money	Non-problem	.18	.84
	Low level	.47***	.63
	Moderate level	.24*	.78

The reference group is the high level of problem gambling group.
† $p < .10$.
* $p < .05$.
*** $p < .001$.

5.1. The relationships between casino marketing strategies and gambling behaviors

Results from the hypotheses testing show that not all acquisition strategies influence gambling behaviors. Specifically, complimentary service provided by casinos has little effect on gambling behaviors although it does affect gambling frequency; whereas Fengshui and easy access to casinos influence gambling frequency, budget and aver age betting. These findings indicate that free transportation (shuttle buses), complimentary food and beverage, and other entertainment facilities offered by casinos may attract gamblers to visit the casino and put in a few bets. However, it is a casino's Fengshui that affects the level of gambling activities and betting volume. These findings ex plain why casinos still provide complimentary service although it has minimal influence on gambling behaviors. Enticing gamblers to visit the casino may influence their future patronage. On the other hand, the effects exerted by Fengshui and good locale account for the fact that some casinos spent millions of dollars on shaping and creating an image of good Fengshui for gamblers such as the Golden Tree and Performance Lake in Wynn casino, and properties located on the main casino stripe with easy access are more popular.

Loyalty program is specially designed to attract customer loyalty. The finding that the program has limited effect on gambling behaviors is self proven. Nevertheless, it does affect gambling frequency. In other words, loyalty program has a direct effect on gambler patronage to the casino. Customer patronage is indicative of behavioral loyalty. The results also show that loyalty program has negative effect, albeit insignificant, on length of stay at the casino and on average betting. This finding indicates that offering loyalty memberships to gamblers

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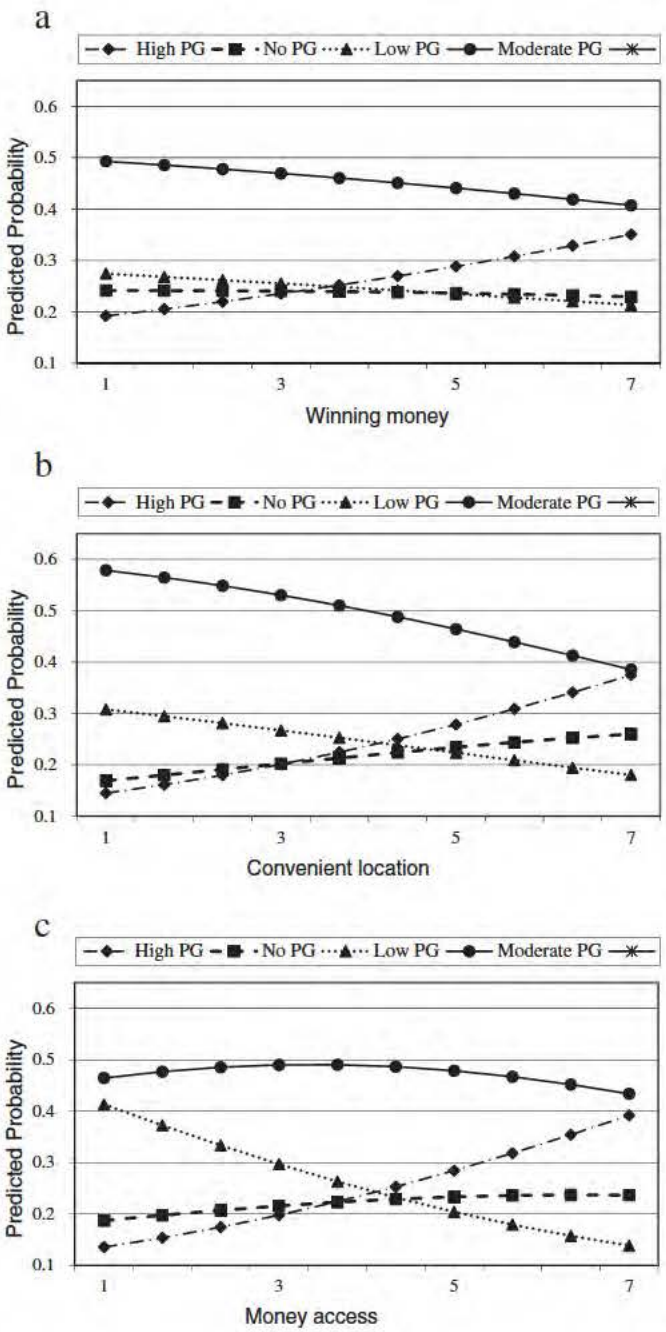

Fig. 2. a. Predicted probability of problem gambler group based on wining money. b. Predicted probability of problem gambler group based on locational convenience. c. Predicted probability of problem gambler group based on ease of money access.

Table 5
Results of Chi-square test between gambler groups and casino membership card status (%).

Gambler groups	Casino membership card status		
	No membership	Basic	Advanced/premium
Non-problem gambling	21.7	18.3	6.1
Low level of problem gambling	15.8	19.8	18.4
Moderate level of problem gambling	47.5	38.9	40.8
High level of problem gambling	15.0	22.9	34.7

Note: $\chi^2_{(6)} = 12.90$, Cramer's $V = .15$, $p < .05$.

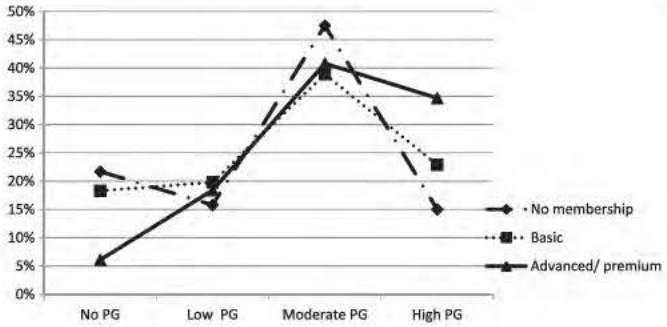

Fig. 3. The relationship between casino membership status and problem gambling.

does not necessarily keep they stay longer and play more in the casino. To stimulate their gambling behaviors, casinos should attend to other means and strategies such as creating a pleasant atmosphere that can be perceived as good Fengshui.

5.2. The relationships among casino marketing strategies, gambling behaviors and customer loyalty

Drawing upon the relationship marketing theory that customer loyalty is achieved through the process of customer acquisition and subsequent retention, the study proposes that acquisition strategies (complimentary service and Fengshui) affect customer loyalty through the mediating role of gambling behaviors; and that the retention strategy (loyalty program) has a direct and indirect effect on customer loyalty. As complimentary service demonstrates insignificant effect on gambling behaviors (the mediator), the mediation relationship is not established. However, Fengshui does influence customer loyalty through gambling budget. This is plausible. When gamblers perceive good Fengshui in the casino, they tend to instill large gaming fund into the casino and gamble for their luck. Casinos often provide special service to customers with high volume of gambling fund. When the check in volume reaches the level that can be classified as high rollers, these gamblers are treated as VIP customers and receive VIP treatment and services, for instance, playing/gambling and dining in the VIP room as well as enjoying all other VIP facilities. In many cases, casino hosts or marketing executives provide personal service to these players. These services for new comers are undoubtedly fresh, enticing and encouraging. Despite the gambling outcome (winning or loss) as most gamblers understand that winning is never guaranteed, even with positive Fengshui (see Kale, 2005), these customers tend to spread positive word of mouth among his peer gamblers and visit the casino again due to the treatment they have received during their first visit. Ultimately they remain loyal to the casino.

The finding that Fengshui (a customer acquisition strategy) and loyalty program (a customer retention strategy) in the post hoc analyses have a hierarchical effect on customer loyalty is consistent with the actual marketing practice in casinos. To achieve customer loyalty, the casino must be able to acquire new gamblers first. Once they enter the casino premises, the retention programs can be made available to attract their future patronage.

As proposed, loyalty program indeed has a direct and indirect effect on customer loyalty. Loyalty program as a customer retention approach targets directly for customer loyalty. This finding demonstrates its effectiveness in the casino context and consistency with that of previous research (Barsky & Tzolov, 2010). The indirect effect that loyalty program has on customer loyalty through gambling frequency accounts for the fact that gamblers are aware of the benefit of being a casino member. They understand that the more visits they pay to the casino, the more they consume in the casino, the more membership rewards they will receive. The finding explains why gamblers hold membership cards with multiple casinos and they tend to visit a few casinos during their stay in

the gambling capital. This result also presents challenges to casinos how they can make the casino as customers' first choice of visit as this deci sion has implications for casino profitability (see Prentice, 2014).

5.3. The relationships among casino marketing strategies, gambling behav iors, customer loyalty and problem gambling

Results from testing the relationships among casino marketing strat egies, gambling behaviors and customer loyalty and problem gambling show that only Fengshui and some gambling behaviors (length of play and gambling budget) affect problem gambling. Loyalty programs and customer loyalty have very little to do with problem gambling. Although the results contrast to the hypotheses, this finding has signif icant implications for casino practitioners and gaming researchers. It clarifies the relationship between gambler loyalty and gambling addiction.

Like customers in any other businesses, gambler/customer loyalty is reflective of their commitment to the firm or its employees, manifest in gamblers' attitudes towards the entity (attitudinal loyalty) as well as their frequent visit to the casino (behavioral loyalty). Such commit ment, especially the attitudinal dimension, may be attributed to cus tomers' trust and positive perception of service quality delivered by the casino (Prentice, 2013, 2014). The behavioral loyalty, however, could be perceived as addiction to gambling or problem gambling, as customers' visiting frequency to the casino entity is one of the criteria assessing customer loyalty in practice. Nevertheless, this study shows that gambling frequency has no effect ($\beta = 0$ see Table 3) on problem gambling at all when other factors are controlled. In other words, some gamblers may visit and gamble in the casino regularly, such regu larity is not indicative of problem gambling or addiction. These gam blers may enjoy all other non gambling facilities and activities that casinos provide, for instance, celebrity chefs, luxurious resorts, concerts and other entertainment shows. Gambling is just part of their recrea tional activities during their stay within the casino premises.

The behaviors that do cause problem gambling are length of playing and gambling budget. Gambling regularly (gambling frequency) is dif ferent from playing for a long period. Some gamblers view gambling as entertainment. They put in a few bets while enjoying casino services and the atmosphere. Regardless of the gambling outcome, they move on to appreciate other casino amenities. These customers are classified as recreational gamblers (Klebanow, 2009). On the contrary, some gam blers focus on winning. To win is their only motive underlying gam bling. This motive may lead to long hours of playing and large betting volume. Initial winning prompts them to believe they can win more. Loss compels them to win back. Such urge may induce their compulsion to gamble (e.g., Lee, Back, Hodgins, & Lee, 2013). Consequently, compul sion turns into gambling problems.

The results from post hoc analyses of the relationship between loyal ty membership status and level of gambling problems confirm the finding that loyalty program has no significant impact on problem gam bling. As shown in Table 5, the majority of gamblers without any casino membership reported having moderate high level of problem gam bling. However, the results also show that a higher percentage of gam blers who hold premium membership have a high level of problem gambling. Coincidentally, these gamblers reported having larger gam bling volume and longer playing time which conforms to the finding of the relationship between gambling behaviors and problem gambling.

Interestingly Fengshui has a direct and indirect effect on problem gambling. In particular, as shown in post hoc analyses, the Fengshui as sociated indicators such as previous winning at the casino, the location and easy access to gambling fund, have significant influence on problem gambling. This may be attributed to gamblers' superstition. Gamblers, especially Asian gamblers, believe that good Fengshui brings them luck. This belief drives them gambling in large volume and playing for extended length of time. Ultimately, as discussed above, gambling problems are incurred.

6. Implications

With intention to bridge two main streams of gambling research, the current study examines the factors of gambler loyalty and problem gambling with a focus on casino marketing acquisition and retention strategies. Findings of this investigation have implications for the gam ing literature as well as for the relevant practitioners. Theoretically, this study enriches the gambling literature by broadening the scope of prob lem gambling research and by extending customer loyalty analyses. Previous research on problem gambling focuses heavily on conse quences and treatment of gambling problems (e.g., Bernhard & Preston, 2004; Petry, 2005). The causes of problem gambling are primarily approached from individual factors such as gambling motivation (e.g., Lee et al., 2013), psychological causes (Dickerson, Haw, & Shepherd, 2003), or the bio psycho social spiritual model of addiction (Horvath, Misra, Epner, & Cooper, 2005). This study provides a new perspective of looking into the antecedents of gambling problems and analyses the influence of external factors (marketing strategies execut ed by gaming venues casinos in this study). In particular, the finding of significant effect of Fengshui on problem gambling may help the relevant practitioners readdress appropriate treatment on problem gambling.

For marketing researchers, this study broadens customer loyalty research by incorporating Fengshui and other customer acquisition strategies into the analyses. Establishment of the hierarchical effects of customer acquisition and retention strategies on customer loyalty sup ports the view on promoting a blended approach, albeit in time order, to attracting loyal customers (see Zeithami, 2000). From marketing prac tice point of view, marketers should be aware that customer acquisition is aimed for increasing market share. To turn acquired customers into loyal clients, appropriate retention strategies should be executed.

The finding that loyalty program has direct and indirect effects on customer loyalty has practical implications for casino marketers. Casinos could approach customers directly and offer them with appro priate memberships. Casino frontline employees could also find oppor tunities to establish relationships with customers during their stay and playing at the casino. The study gives indication to these employees on what criteria should be focused to select potential loyal customers. As shown in this research, frequent patrons, quantity of front check in and average betting are some of these criteria. However, from responsi ble gambling perspective, the employees should avoid approaching those who gamble in large volume and play for long hours in the casino, as these behaviors lead to problem gambling (see Table 3).

7. Limitation and future research

Notwithstanding that the paper has attempted to address the possible issues embedded this investigation, a few limitations arise. The study was only conducted in one location though it is the world gambling capital Macau. Application of the findings may limit to this region and to Asian gamblers. There are 35 casinos in Macau. The researchers endeavored to cover all major casinos. However, the sample is rather small. A larger sample would enable more effective statistical analyses. The study intended to examine the effects of casino marketing strategies on cus tomer loyalty and problem gambling. The strategies that are included in this study are rather limited. More customer acquisition and retention strategies could be identified for comprehensive analyses. Future research should attend to these limitations and generate more generaliz able findings.

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