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Using integrated satisfaction theory to explain how gaming tourism affects tourism through word-of-mouth communication regarding a destination

Abstract

Gaming tourism is one of the special forms of tourism. The governments of gaming destinations attempt to take advantage of gaming tourism to boost the development of other tourism sectors. However, the role of gaming tourism is questioned by its opponents. This study tries to apply the concept of integrated satisfaction to investigate the effects of satisfaction on gaming and non-gaming experiences through tourism word-of-mouth communication regarding gaming destination. The results of the study indicate that integrated satisfaction has a partially mediating effect on the relationship between non-gaming satisfaction and word-of-mouth, and integrated satisfaction has a moderating and partially mediating effect on the relationship between gaming satisfaction and word-of-mouth. This study extends our knowledge in the integrated satisfaction theory and transaction-specific satisfaction studies. In addition, a multiple-group analysis was performed to compare the behaviours of first-visit and repeat-visit tourists. The study helps gaming destinations to formulate strategies for tourism development.

Keywords gaming satisfaction, integrated satisfaction theory, transaction-specific satisfaction, word-of-mouth, gaming destination

Introduction

Gaming tourism (or gambling tourism or casino tourism) is one of the special forms of tourism which entices large numbers of people to visit destinations with a high concentration of casinos and gaming sites such as Las Vegas and Macau (Metaxas and Folinas 2016). Local legislation often does not permit gambling activities in the majority of the cities/countries in the world, thus people are drawn to engage in 'legal' activities in gambling destinations. However, when considering gaming tourism, people may associate it with gambling addiction either just enjoying the thrill of risk, or some kind of a connection with a series of delights such as luxury travel, the abundance of material goods and so on (Loo, Shi, and Pu 2016). Therefore, it raises a strong debate when a tourist city tries to revise local laws in order to develop gaming tourism often to bolster a weak economy. One of the strongest objections is that these kinds of tourism only engage in gambling and that this does not contribute much to the overall tourism industry in terms of sustainability. Some opponents of gaming have even maintained that should visitors lose money through gambling then they may spread negative word-of-mouth comments regarding a destination that may influence other people not to go there, as a serious consideration in the era of social media. For having a positive image of the destination, governments of destination cities use the terms of 'gaming destination' instead of 'gambling destination' for publicity. Whatever gaming or gambling, there is a need to provide evidence for answering the debate question whether gaming activities cause negative or positive word-of-mouth communication regarding a gaming destination.

Macau is the gambling capital of the world and generated three times the gambling revenue as compared with Las Vegas in 2017 (valuwalk.com 2017). Before Macau's status as a Portuguese colony was changed to that of a Chinese Special Administrative Region (SAR) in 1999, its visitors mostly came from neighbouring

Hong Kong as gambling was forbidden there (Hobson 1995). Recently, the Macau government began re-investing its revenue from gaming tourism into other tourism sectors (Mieiro, Ramos, and Alves 2012). Consequently, after establishing many large resorts (such as Venetian Macao) and strategically promoting non-gaming tourism activities (such as the House of **Dancing Water**), it emerged in 2016 that only 21.7 percent of Hong Kong visitors reportedly came to Macau to engage in gaming (DSEC 2016). In common with other gaming destinations, the majority of visitors would engage in a mix of gaming and non-gaming activities. Tourists' satisfaction with a given destination would appear to be influenced by word-of-mouth accounts of other visitors' experiences and that this may impact upon their behaviour with a given destination (Wang, Tran, and Tran 2017). However, there remains a paucity of studies investigating the effects of satisfaction with gaming and non-gaming experiences combined with tourist behaviour intentions.

A few years ago, Gao and Lai (2015) introduced the concept of integrated satisfaction where 'integrated satisfaction' is described as the overall satisfaction with an entity which facilitates more than one product or service for the customers. This method is applicable for this case because tourism activities in a gaming tourist city can be divided into two services (gaming and non-gaming services) and different tourists may have different levels of prefer for different services. Applying Gao and Lai's (2015) concept, the integrated satisfaction in this study is the overall satisfaction with these two types of tourism activities experienced in a gaming destination. Referring to Jones and Suh (2000) and Gao and Lai (2015), this integrated satisfaction may play significant mediating and moderating roles between satisfactions of gaming and non-gaming experiences and tourist behaviour. Thus, the first aim of the study is to explore these relationships in order to understand the role of gaming in tourism development in gaming destinations in terms of building word-of-mouth

communication regarding the gaming destination.

In the Asia-Pacific region, gaming tourism is increasingly deployed as a means of developing tourism in **general** (Eadington 1999; Walker 2009), a case in point being Singapore, which became the world's third-largest gaming hub after legalizing gambling in 2010 (Barlowe 2013). However, there is a lack of literature to explain how gaming tourism helps a destination to sustainably develop its tourism industry in general terms. **Regarding** gaming destinations such as Macau **which aims to** strengthen **its strategic direction** of being the 'World Centre of Tourism and Leisure', here, we need to answer the second debate question how gaming tourism can help a sustainable development of tourism industry in general terms. For answering this question, clarifying misunderstandings, and filling the gaps in knowledge between gaming tourism and tourism in general, the second aim of the study is to compare the behaviours of two groups of tourists (the first-visit and repeat-visit tourists) for understanding the essential elements for attracting new visitors and retaining repeat-visit visitors. The results of this comparison could help governments and the operators of casino resorts to develop more effective strategies and policies for integrating gaming tourism with other forms of tourism in order to develop sustainable tourism generally.

Although this study **acknowledges** Gao and Lai's (2015) concept, the study has to address three limitations of their study. Firstly, Gao and Lai (2015) only surveyed tourists who have experienced all the services in an integrated resort. Since not all visitors to Macau engaging in gaming, this study not only surveys visitors who have both gaming and non-gaming tourism experiences but also who do not have gaming experience. Secondly, the four types of services quoted in Gao and Lai's (2015) study are supplementary, cannot be substituted by one another, and do not have a conflict with others. But gaming and non-gaming activities may be a rival of each other.

Thirdly, Gao and Lai (2015) used formative attributes to measure four transaction-specific satisfactions. According to the nature of the study, reflective items will be employed to measure non-gaming and gaming satisfactions. The results of this study provide a contribution to customer satisfaction theory by further validating the concept of integrated satisfaction in an alternative research setting which in this case is tourism.

Literature Review

The Development of gaming tourism

Casino gambling has been legal in Nevada since 1931 (Skonick 1978) and, though Macau has a long history of gaming, its first casino in modern terms opened in 1962 under a government-issued monopoly licence. According to Casinopedia's (2017) definition, 'gaming tourism', is a combination of the travel and gaming sectors, covering those players who visit places specifically to gamble as well as the industries which support those players. However, according to some tourism researchers, 'casino gaming' is a product for promoting tourism (Cochrane 2008; McCartney 2016) and is a fastest growing component of the tourism industry (MacLaurin and MacLaurin 2003). Therefore, 'gaming tourism' can act as a catalyst that incorporates destination branding strategies that develop the overall tourism industry (Felsenstein, Littlepack, and Klacik 1999). Recently, studies have appeared concerning gaming cities (Bulatovic et al. 2017), but only a few of them are directly concerned with the development of gaming tourism and its role in the sustainable development of tourism generally.

In the 80s, many **tourism** cities started to address the legal issues concerned with the introduction of gaming tourism. Researchers used different methods such as surveys (Caponio 1982) and economic analysis (Israeli and Mchrez 2000) to predict the implications of introducing gaming tourism. As Lee and Back's (2003) study by

using on social exchange theory, these studies provided information on tangible benefits that support the development of gaming tourism. On the other hand, many studies explored the drawbacks of gaming tourism to protest against the development of gaming tourism. Researchers argued that gambling is a source of social problems such as gambling addiction, crime, drug abuse, and alcoholism (Dyer et al. 2007; Haralambopoulos and Pizam 1996; Lee and Back 2003). However, Park and Stokowski (2011) found that total violent crimes and total arrests were not significantly different across the gaming counties and other types of tourism centres. They even found that ski destinations had a significantly higher property crime rate than did gaming and other types of tourism counties (ibid.).

In the last thirty years, some tourist cities have tried to emulate the success of Las Vegas and Atlantic City in attracting tourists (Long 1995) through relaxing their legislation on gaming tourism. Accordingly, researchers began to evaluate the impact of gaming tourism on different aspects in these cities. For example, Perdue, Long, and Kang (1999) assessed the impact of gaming tourism on residents' quality of life (QOL) in host communities and found that residents had moved from an initial negative change in QOL to a positive QOL. However, Hse (2000) found that residents in Iowa and Illinois were significantly less positive about the legalization of gaming in these states in 1998 than in 1993. One of the gaming cities that has embraced the Las Vegas style and created its gaming tourism model is Macau (Gu 2004). Vong (2009) observed that as gaming became more accessible in Macau (five years after casino license deregulation in 2002), residents had a more conservative attitude toward gambling. Other than from the residents' personal views, Wan (2012) elicited community leaders' views of gaming tourism booming and summarized the pros (positive social, economic and environmental contributions to the community) and cons (negative social and environmental consequences) of gaming tourism in Macau.

Following the successful adoption of gaming tourism, governments of destination cities commonly seek the ways to harnessing the vitality of gaming tourism for developing tourism in general in a sustainable manner. However, there is a paucity of studies on tourists' perspectives on gaming tourism and on how this may be linked to the sustainable development of tourism more generally.

Satisfaction theory

In the early days, marketing scholars adopted Festinger's (1957) theory of cognitive dissonance to understand why consumers are satisfied and dissatisfied. Thus, early consumer satisfaction theory examined consumer satisfaction by measuring the dissonance between expectations and product performance (Cardozo 1965). However, Curmmings and Venkatesan (1976) reviewed 23 studies and identified a number of empirical and conceptual limitations and, in order to address these limitations, marketing researchers attempted to employ assimilation–contrast theory (Sherif and Hovland 1961) to predict the effects on consumer satisfaction of disparities between expectations and objective product performance. The theory assumes that individuals have ranges or latitudes of acceptance (satisfaction) and rejection (dissatisfaction) in **terms of consumer perceptions**. Although laboratory experiments (with simple settings such as ballpoint pens) were successfully used, it caused serious methodological concerns in terms of real practice (Telci, Maden, and Kantur 2011) **not least** because, for more complex products, there is considerable ambiguity and uncertainty in making judgments (Anderson 1973). Therefore, with respect to above issues, Oliver (1997, 306) argued that satisfaction is the end state of a psychological evaluation process that consumer satisfaction is “the summary psychological state resulting when the emotions surrounding disconfirmed expectations are coupled with the consumer's prior feelings about the consumption experience”.

In order to evaluate consumer satisfaction, two different concepts are used to

evaluate it. Transaction-specific satisfaction refers to the consumer's satisfaction with a discrete product/service encountered (Bitner and Hubbert 1994). Keiningham et al. (2014) described a transaction-specific satisfaction as a satisfaction with a discrete transaction. Overall satisfaction refers to the customer's overall evaluation of a product or service provider to date (Bitner and Hubbert 1994), so it can be viewed as a function of all previous transaction-specific satisfactions (Parasuraman, Zeithaml, and Berry 1994). Keiningham et al. (2014) described an overall satisfaction as a cumulative satisfaction. Previous research has tended to measure satisfaction either on a transaction-specific level (e.g. Bitner and Hubbert 1994) or on an overall level (e.g. Pizam and Ellis 1999), but not in both ways. Thus, Jones and Suh (2000) empirically used three alternative structural models to investigate the relationships among transaction-specific satisfaction, overall satisfaction, and repurchase intentions as shown in Figure 1. They found that overall satisfaction has a direct influence on repurchase intentions as well as a mediating and moderating influence on the transaction-specific satisfaction and repurchase intentions relationship. Later on, some researchers followed Jones and Suh's (2000) models in different research settings (e.g., Maxham and Netemeyer 2002; Jiang and Rosenbloom 2005; Olsen and Johnson 2003; Bodet 2008), but none of them could successfully validate the three alternative structural models.

Take in Figure 1

Integrated satisfaction

Since tourism services are experiential in nature, the evaluation of tourism services is augured to be more complex than that of goods (Reisinger and Waryszak 1996; Zeithaml 1981). In studies of tourism, customer satisfaction can be classified into three levels: product-service satisfaction (a satisfaction with an individual product-service experience delivered), dimensional satisfaction (a summation of satisfactions

derived from individual products and services), and total satisfaction (accumulation of all the individual products-service level and dimensional level satisfactions) (Yuksel and Yuksel 2008). After considering the above approaches, Gao and Lai (2015) introduced a new form of satisfaction - 'integrated satisfaction' that can be described as the overall satisfaction with an entity which facilitates more than one product or service for the customers, and this integrated satisfaction plays a significant mediating and moderating roles between transaction-specific satisfaction and customer loyalty. They have successfully validated the concept of integrated satisfaction by examining the relationship among transaction-specific satisfaction, integrated satisfaction, and customer loyalty within the context of integrated resorts as shown in Figure 2. By comparing the nature of four services (food and beverage, hotel, casino, and shopping) in different integrated resorts in Macau, they revealed that high similarity in service shows the full mediating effect of integrated satisfaction; medium similarity in service has a partial mediating effect of integrated satisfaction; and low similarity in service has a partial mediating and moderating effect on integrated satisfaction.

Take in Figure 2

Attribute satisfaction vs transaction-specific satisfaction

Previous studies in both marketing and tourism have identified that attribute satisfaction is an antecedent of overall satisfaction (Chi and Qu 2008). Since attributes have more diagnostic value than overall assessments of satisfaction (Lim and Chung 2011; Mittal, Ross, and Baldasare 1998), we can compare the effects of a group of attribute satisfactions on consumer behaviour through overall satisfaction. However, with regard to some the tourism studies (Phillips, Wolfe, Hodur, and Leistriz 2013), researchers only employed one attribute satisfaction comprising different tourism activities. Thus, from their research, we know little about the effects of different tourism activities. If one attribute satisfaction only composes of one type of tourism

activities, such as Hall, O'Mahony, and Gayler's (2017) study, the attribute satisfaction in this setting can be viewed as a transaction-specific satisfaction. If so, the study on the effects of different attribute satisfactions on consumer behaviour through overall satisfaction can be viewed as the study on the effects of different transaction-specific satisfactions on integrated satisfaction as Gao and Lai's (2015) study. Figure 3 shows the research model structures of attribute satisfaction and transaction-specific satisfaction.

Take in Figure 3

This study extended Gao and Lai's (2015) concept of integrated satisfaction. In this study, transaction-specific satisfaction is a tourist's satisfaction with a type of tourism activities on a trip, and integrated satisfaction is the overall satisfaction with all the tourism activities experienced on a trip. Table 1 summarizes the concepts of overall satisfaction, transaction-specific satisfaction, integrated satisfaction, and attribute satisfaction. It clarifies the similarities and differences between different terms of satisfaction and helps researchers with a clear understanding to select appropriate research instruments for different types of satisfaction research.

Take in Table 1

Tourist satisfaction and word-of-mouth studies

With regard to marketing research, there **are many** studies in consumer satisfaction and its effects on consumer behaviours. Kotler and Keller (2015) stated that satisfied customers will tend to say good things and to recommend the product or service to others. Tourist satisfaction has been indicated to be able to affect tourist behaviour such as tourism word-of-mouth (Coban 2012). In marketing research, word-of-mouth is defined as verbal and interpersonal communication, which refers to a product, service or brand and which is occurring between a communicator and a receiver (Arndt 1967). Since tourists are actively seeking information or the experiences from

other tourists for planning their trips, so having past visitors recommend the area through positive word-of-mouth could be one of the most effective marketing tools to bring new visitors (Phillips et al. 2013).

Several researchers have tested the relationships between attribute satisfaction, overall satisfaction, and tourist behaviour. Chi and Qu (2008) and Phillips et al. (2013) tested the effects of tourists' attribute satisfaction and overall satisfaction study in Arkansas-Eureka Springs and North Dakota respectively. They both used a single question to measure the overall satisfaction and found that overall satisfaction has a mediating effect between attribute satisfaction and intentions to recommend. Chi and Qu (2009) further examined the effects of seven 'attribute satisfaction' factors on overall satisfaction (measured by a multiple-item scale) with travel experiences and found tourists' overall satisfaction depended on four factors (lodging, attractions, environment, and dining). More recently, Hall, O'Mahony, and Gayler (2017) found that different tourist segments were motivated by different attributes and that not all the attributes needed to be satisfied in order to achieve overall satisfaction and positive behavioural intentions in Australian ski resorts. They only tested the fully mediating effect of overall satisfaction between seven attribute satisfactions and behavioural intentions.

It can be concluded that none of the above studies has tested the moderating effect of overall satisfaction on the relationship between attribute satisfaction(s) and tourist behaviour. Therefore, no relevant studies were found in the literature **review** conducted on major academic databases (ScienceDirect, EBSCOhost, and ProQuest) about the roles of integrated (or overall) satisfaction on the relationships between different transaction-specific satisfactions and tourist behaviour toward a destination.

Research Method

Research model and hypotheses

Since each specific component of traveling to a destination will influence the tourists' overall satisfaction (Seaton and Benett 1996; Hsu 2003), so a tourist who is satisfied with any tourism experiences may be satisfied with integrated experiences with all tourism activities in a destination. For example, a ski tourist who is satisfied with the slopes in alpine ski areas will show overall satisfaction with the ski resorts (Hall et al. 2017). In a gaming tourist city, tourists can have two types of experiences. A tourist who is satisfied with non-gaming experience may lead to satisfying with all the integrated experience in a gaming destination. On the other hand, if a tourist who is unsatisfied with gaming experience may lead to dissatisfying with the integrated experience in a gaming destination, and vice versa.

Hypothesis 1. The tourist's satisfaction with non-gaming tourism experiences has a positive impact on the integrated satisfaction with tourism experience in a gaming tourist city.

Hypothesis 2. The tourist's satisfaction with gaming tourism experiences has a positive impact on the integrated satisfaction with tourism experience in a gaming tourist city.

Gao and Lai (2015) argued that an integrated resort is a place that provides integrated tourism services to its visitors, so the integrated satisfaction with the integrated resort influences tourists' loyalty that includes word-of-mouth recommendations of the integrated resort to other visitors. Bigne, Sanchez, and Sanchez (2001) found that the greater the tourist's satisfaction with the holiday experience in a destination, the more likely it is that he or she will recommend it. This satisfaction with holiday experience can be viewed as an integrated satisfaction because it covers all tourism services encountered in a destination. For a gaming tourist city, the integrated satisfaction covers the satisfaction with both non-gaming and gaming tourism experiences, this integrated satisfaction may influence tourists'

intention to provide positive tourism word-of-mouth regarding a gaming tourist city.

Hypothesis 3. The tourist's integrated satisfaction with tourism experiences has a positive impact on tourist positive word-of-mouth of the gaming tourist city.

Figure 4a shows the full mediation model that presents above three hypotheses. Jones and Suh (2000) and Gao and Lai (2015) proposed that the relationship between certain transaction-specific satisfaction and repurchasing intention/customer loyalty are partial mediated (as shown in Figure 4b) and also moderated (as shown in Figure 4c) by overall/integrated satisfaction. This study will compare the results of these three models in the following section.

Take in Figure 4

Measurement scales

Since this study attempts to revalidate Gao and Lai's (2015) integrated satisfaction model, it is reasonable to adapt their measurable items of integrated satisfaction with appropriate revision for measuring both transaction-specific satisfaction with non-gaming and gaming tourism experiences. These four reflective items (satisfied, value of money, expectation, level of satisfaction) were originally sourced from Bloemer and Odekerken-Schroder (2002). Three measurable items (sharing with others, positive comments, and recommendation) for measuring tourism word-of-mouth were also borrowed from Gao and Lai's (2015) study and were originally sourced from Kim, Kim, and Kim (2009). The measurable items for satisfaction and word-of-mouth mechanisms in this study were widely used in the field of tourism. The 15 measurable items are shown in Table 3. All questions for 4 constructs were on a 7-point Likert scale, ranging from 1 = strongly disagree to 7 = strongly agree.

Questionnaire design and data collection

The subjects of this study are tourists in Macau who have participated in non-gaming

tourism activities and have non-gaming tourism experiences during their visits. These tourists might or might not have participated in gaming tourism activities, so they might or might not have gaming tourism experiences. Thus, regular gamblers who only engage in gaming activities are excluded from this study. At the beginning, a filter question “did you have experiences in non-gaming tourism activities on this trip?” was asked. In order to filter regular gamblers, a second filter question “what is the percentage of time you have spent in gaming activities on this trip?” was followed. Only the respondents who answered “yes” to the first filter question and “less than 50%” in the second filter question were invited to complete the questionnaire. Then, a question “is it your first time to Macau?” was asked to identify the first-visit tourists. After these three questions, the questionnaire was composed of seven sections. The first section asked the respondents to rate 4 questions for the integrated satisfaction with tourism experiences on the trip. In order to reduce common method bias (Podsakoff and Organ 1986), three sections were inserted in between the sections of four constructs. The second section asked the respondents something about their emotions that are not directly related to this study. The third section asked the respondents to rate 4 questions for the transaction-specific satisfaction with non-gaming tourism experiences. The fourth section asked respondents their gender and age. The fifth section asked respondents to rate 3 questions about their intention to provide word-of-mouth recommendation. The sixth section included the questions about respondents’ other demographic profiles. The final section first identified respondents whether they have played games on the trip. If they have, then 4 questions for the transaction-specific satisfaction with gaming tourism experiences were asked. Since most of the tourists in Macau were Chinese (Macao Tourism Data plus 2017), the questionnaire was designed in a bilingual format. The questionnaire was originally developed in English and then translated into

Chinese with back translation to check accuracy. With regard to assessing content validity, the draft of the questionnaire was checked by two professors of tourism. Then, a pilot survey was conducted with 30 guests at 3 destination resorts during 20-26 July 2017.

Survey data were collected in August 2017. Two trained research assistants administrated the regular sampling process with intervals (every 30 minutes) from 9 a.m. to 11 p.m. inside the 8 major destination resorts in Macau. Since destination resorts provided a stable and comfortable environment (having air conditioning and lighting) in which respondents can answer questions, so destination resorts can provide an essential condition for systematic sampling. Furthermore, there are gaming and non-gaming tourism activities in the destination resorts, thus whether tourists they are lodging in destination resorts or not, they will visit destination resorts on the trip in Macau. Although major resort hotels don't allow people to **publically** survey visitors, **the** research assistants **discreetly** took one sample every half hour, the survey was short, and they something targeted the visitors in coffee shops (e.g., Starbuck) or some resting places, so they could complete the survey without large disturbances. Totally 312 sets of questionnaires were collected and 14 sets of questionnaires were removed since they were given the same rating for most items. Finally, 298 sets are valid for data analysis.

Findings

Respondent characteristics

The respondent characteristics are shown in Table 2. There are 110 first-visit tourists (36.9%) and 188 repeat-visit tourists (63.1%). The sample of respondents was composed of 46.6% males and 53.4% females. With regard to age, the majority of the respondents were in the 18-29 age group (156, 52.3%). About one-third of respondents (37.6%) are with a monthly income below US\$1000 and another one-

third of respondents (37.2%) are with a monthly income US\$1000-2999. For the repeat-visit tourists, about half of them have played games (53.7%). However, for the first-visit tourists, only one-fourth of them have engaged in gaming (25.5%).

Take in Table 2

Construct reliability and validity

Table 3 shows the mean, standard deviation, kurtosis, skewness, and PLS factor loading of 15 measurable items. All PLS factor loadings of items are greater than the minimum threshold value of 0.70 (Hair et al. 2017). As shown in Table 4, the values of Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) for each construct are greater than 0.7, 0.7, and 0.5 respectively, these results indicate that the measurement scales for each construct are acceptable for high convergent and construct validity (Hair et al. 2010). Furthermore, discriminant validity is assessed by Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio. The values of the square-root of AVE for each construct are greater than the correlations between the construct and all other constructs (Fornell and Larcker 1981), and the values of all HTMT correlations were less than 0.90 (Henseler, Ringle, and Sarstedt 2015), so these results confirm the discriminate validity of the measurement model.

Take in Tables 3 and 4

Results of PLS-SEM analysis

This study follows the analysis steps in Gao and Lai's (2015) study and utilizes PLS-SEM analysis to compare three alternative models representing different mediation and moderation structures. Since PLS-SEM analysis is especially suitable for measuring the moderating effect of the relationship between independent and dependent variables (Chin, Marcolin, and Newsted 2003), so PLS-SEM using bootstrapping (with 298 observations per subsample and 5,000 sub-samples) is

performed by using the SmartPLS v.3.2.6 package (Ringle, Wende, and Becker 2015). By bootstrapping, the PLS-SEM analysis is more robust with small and non-normal data (Hair et al. 2017), thus data in this study does not need to conform to the requirement of normality. In this study, ‘mean value replacement’ was selected to handle the missing data of gaming satisfaction for respondents who did not play games on the trip because it is easy to implement and more suitable than ‘casewise deletion’ and ‘pairwise deletion’ (Hair et al. 2017). Table 5 shows the results of PLS-SEM analysis for three alternative models. Three models show the same level of explanation in integrated satisfaction ($R^2 = 0.300$), but the partial mediation and moderation model produces the best explanation in word-of-mouth ($R^2 = 0.514$). Also, the value of Goodness of Fit (GoF) for the partial mediation and moderation model (0.575) is larger than the values of GoF for other two models (0.510 and 0.555 respectively). The GoF measure is the geometric mean of the communality (outer mode) and the average of R-square (inner mode) for endogenous constructs (Tenenhaus et al. 2005). Therefore, the partial mediation and moderation model provides the best explanation of the relationships between transaction-specific non-gaming and gaming satisfactions, integrated satisfaction, and word-of-mouth within the context of gaming tourist cities.

Take in Table 5

The results of PLS-SEM analysis for the partial mediation and moderation model (as shown in Figure 5) demonstrate that both non-gaming and gaming satisfactions significantly influence integrated satisfaction ($\beta = 0.413$, t-statistics = 5.320; $\beta = 0.222$, t-statistics = 2.797); non-gaming satisfaction, gaming satisfaction, and integrated satisfaction all have a significant direct effect on word-of-mouth ($\beta = 0.341$, t-statistics = 4.614; $\beta = 0.179$, t-statistics = 2.492; $\beta = 0.409$, t-statistics = 5.945); and integrated satisfaction moderates the effect of gaming satisfaction on

word-of-mouth ($\beta = 0.179$, t -statistics = 2.932). Thus, H1, H2, and H3 are supported.

Take in Figure 5

Table 5 also reports the values of the Variance Inflation Factor (VIF) for each independent variable for verifying any multicollinearity problems. The results indicate that all the values of VIF are below the threshold value of 5, so there is no multicollinearity (Hair, Hult, and Ringle 2017).

To better understand the moderating influence of integrated satisfaction, a simple slope analysis is performed. Figure 6(a) shows the results of the simple slope analysis on the centered data (z -scores) at high (+1 S.D.) and low (-1 S.D.) values of the integrated satisfaction (moderator). The results of simple slope analysis show the relationship changes that a higher level of the integrated satisfaction has a steeper slope, so a higher level of the integrated satisfaction entails a stronger relationship between gaming satisfaction and word-of-mouth.

Take in Figure 6

Results of multi-group analysis

For analysing the differences between the group of first-visit tourists and the group of repeat-visit tourists, a multi-group analysis is performed by using PLS-MGA function that compares each bootstrap estimate of one group with all other bootstrap estimates of the same parameter in the other group (Hair et al. 2017). Table 6 shows the results of PLS-SEM analysis for the group of first-visit tourists and the group of repeat-visit tourists. For the first-visit tourists, only non-gaming satisfaction affects integrated satisfaction and word-of-mouth and integrated satisfaction partially mediates the relationship between non-gaming satisfaction and word-of-mouth. For the repeat-visit tourists, the results are similar to the whole sample. The results of PLS-MGA show that there are significant differences in the effect of gaming satisfaction on word-of-

mouth and in the effect of interaction between gaming satisfaction and integrated satisfaction on word-of-mouth. The following section will discuss these results.

Take in Table 6

Discussions and conclusion

Conclusion

The results of the study indicate that both transaction-specific satisfactions with non-gaming and gaming experiences have a direct effect on integrated satisfaction with tourism experiences and tourism word-of-mouth towards a gaming tourist city; integrated satisfaction with tourism experiences has a partially mediating effect on the relationship between transaction-specific satisfaction with non-gaming experiences and tourism word-of-mouth; and integrated satisfaction has a moderating and partially mediating effect on the relationship between transaction-specific satisfaction with gaming experiences and tourism word-of-mouth. Thus, the first aim of the study is achieved.

The results of PLS-MGA indicate that gaming satisfaction does not have any effects on both integrated satisfaction and word-of-mouth behaviour for the first-visit tourists. On the other hand, both gaming and non-gaming satisfaction have effects on integrated satisfaction and word-of-mouth behaviour for the repeat-visit tourists. Thus, the second aim of the study is achieved.

Theoretical contribution

This study contributes to knowledge in further validating the integrated satisfaction theory in a tourism setting. Gao and Lai (2015) introduced the concept of integrated satisfaction and tested it in an integrated resorts setting where integrated resorts. In their study, they mentioned that one of the limitations of their study was the respondents required an experience of all four services. However, many tourists take advantage of various types of services. Therefore, this research setting has addressed

this limitation. This study tests the sample in which all the respondents had experiences in non-gaming tourism activities but not all the respondents played games and so some respondents did not have experiences in gaming tourism activities. Table 7 compares the research settings of this study with Gao and Lai's (2015) study. Furthermore, because not all the destinations have legalized gambling, the similarity of gaming service between Macau and other destinations is low; therefore, for the transaction-specific satisfaction with gaming experience, the results of this study indicate that there is a partially mediating and moderating effect on integrated satisfaction. These results support Gao and Lai's (2015) explanation of service similarity in the integrated satisfaction theory that medium similarity in service (non-gaming tourism activities) has a partially mediating effect of integrated satisfaction and low similarity in service (gaming tourism activities) has a partially mediating and moderating effect on integrated satisfaction.

Take in Table 7

The results of Jones and Suh (2000) and Gao and Lai's (2015) studies showed that the interaction between transaction-specific satisfaction and overall/integrated satisfaction negatively influences the repurchase intention/ loyalty behaviour. The negative interaction effect explained that the overall/integrated satisfaction takes a role as a 'supplement' for a weak transaction-specific satisfaction for its effect on consumer behaviour. However, this study shows a positive interaction effect of transaction-specific satisfaction with gaming tourism experiences and integrated satisfaction on the tourism word-of-mouth recommendation (as shown in Figure 6). Thus, a visitor who is satisfied with gaming tourism activities is willing to provide more word-of-mouth recommendations if he/she has a high level of integrated satisfaction with two types of tourism activities (non-gaming and gaming). This study further clarifies that integrated satisfaction can take a role as an 'amplify' for a

transaction-specific satisfaction. This finding provides researchers with a greater understanding of the roles of integrated satisfaction in different settings. However, “when is it a ‘supplement’ or an ‘amplify’?” is still a question for researchers to take further studies to find out the answer.

In this study, four reflective items (satisfied, value of money, expectation, level of satisfaction) were used to measure non-gaming and gaming satisfactions. These items are not based on attributes. However, Gao and Lai’s (2015) study used formative attributes to measure four types of transaction-specific satisfactions. Therefore, an attribute satisfaction can be a transaction-specific satisfaction, but a transaction-specific satisfaction may not be an attribute satisfaction. When defining a transaction-specific satisfaction, researchers are measuring the satisfaction with a particular service at a particular time. Therefore, there are three types of overall satisfaction as shown in Figure 7. Studies in transaction-specific satisfaction with cumulative satisfaction were emphasized on the satisfactions in different time phases (most recent vs all previous). Studies in transaction-specific satisfaction with integrated satisfaction measured the satisfactions at the same time phase (e.g. current visit). Since tourists seldom revisited the same destination frequently, so the concept of cumulative satisfaction (as overall satisfaction) is not easy to be applied in tourism studies. Therefore, alternatively, the concept of integrated satisfaction is more appropriate for tourism studies.

Take in Figure 7

The results of multi-group analysis performed by PLS-SEM analysis indicate that there are significantly differences in the effects of transaction-specific satisfaction with gaming tourism experiences and the interaction between gaming satisfaction and integrated satisfaction on the tourism word-of-mouth between the first-visit group of tourists and repeat-visit group of tourists ($\beta'_{g(\text{first-visit})} - \beta'_{g(\text{repeat-visit})} = -0.239, p\text{-value}$

= 0.968; $\beta'_{g*is} * IS_{(first-visit)} - \beta'_{g*is} * IS_{(repeat-visit)} = -0.263$, p -value = 0.984). These results imply that non-gaming satisfaction is the source of integrated satisfaction and word-of-mouth recommendation for first-time visitors. They do not provide positive or negative word-of-mouth recommendations whether satisfied or unsatisfied with gaming tourism activities. It provides the answer to the first debate question that gaming activities do not cause any negative or positive word-of-mouth communication regarding a gaming destination for the first-visit tourists. However, for repeat-visit tourists, gaming satisfaction is one of the sources of integrated satisfaction and word-of-mouth recommendation. So, repeat-visit tourists are also looking for the transaction-specific satisfaction with gaming tourism activities. Then, it answers the first debate question that gaming activities cause positive word-of-mouth communication regarding a gaming destination for the repeat-visit tourists. Therefore, by providing transaction-specific satisfaction with gaming tourism experiences to tourists, gaming tourism plays an important role in retaining visitors and enhancing intentions a gaming tourist city.

The results of this study provide evidence to show how the satisfaction with gaming tourism experiences helps to develop tourists' positive word-of-mouth so as to help for creating a good destination image that can attract both gaming and non-gaming tourists as well to enhance tourism generally. Both transaction-specific satisfactions with gaming and non-gaming tourism experiences affect the integrated satisfaction with tourism experiences (equation 1). The satisfaction with gaming tourism experiences not also has a direct effect on tourism word-of-mouth but also has an interactive effect with integrated satisfaction with tourism experiences on tourism word-of-mouth (as shown in equation 2). Then, equation 4 shows that for the effect of satisfaction with non-gaming tourism experience, other than its original

effect β'_{ng} , it also has a positive interactive effect $(\beta'_{g*is} * \beta_{ng} * S_g)$ with the satisfaction with gaming tourism experiences on tourism word-of-mouth. Therefore, gaming tourism can enlarge the effect of transaction-specific satisfaction with non-gaming tourism experiences on tourism word-of-mouth so as to help the development of tourism industry. This study bridges the gap of knowledge between gaming tourism and non-gaming tourism by showing the interactive effect of these two experiences on tourist behaviour. These equations provide the answer for the second debate question of how gaming tourism can help a sustainable development of the tourism industry in general terms.

$$IS = C + \beta_{ng} * S_{ng} + \beta_g * S_g + \varepsilon \quad (1)$$

$$WOM = C' + \beta'_{ng} * S_{ng} + \beta'_g * S_g + \beta'_{is} * IS + \beta'_{g*is} * IS * S_g + \varepsilon \quad (2)$$

$$WOM = C'' + \beta'_{ng} * S_{ng} + \beta'_g * S_g + \beta'_{is} * (\beta_{ng} * S_{ng} + \beta_g * S_g) + \beta'_{g*is} * \quad (3)$$

$$(\beta_{ng} * S_{ng} + \beta_g * S_g) * S_g + \varepsilon$$

$$WOM = C'' + (\beta'_{ng} + \beta'_{is} * \beta_{ng} + \beta'_{g*is} * \beta_{ng} * S_g) * S_{ng} \quad (4)$$

$$+ (\beta'_g + \beta'_{is} * \beta_g + \beta'_{g*is} * \beta_g * S_g) * S_g + \varepsilon$$

where WOM = word-of-mouth; IS = Integrated Satisfaction with tourism experiences; C , C' , C'' = Constant; ε = error; S_{ng} = Satisfaction with non-gaming tourism experiences; S_g = Satisfaction with non-gaming tourism experiences; β_i = coefficient of satisfaction with type i of tourism experiences

Implication for practice

The results of PLS-SEM analysis for the first-visit tourists show that their word-of-mouth is mainly generated from their transaction-specific satisfaction with non-gaming tourism experiences and their integrated satisfaction with tourism experiences. The results of systematic sampling indicate that three out of four first-visit tourists did not play games. Therefore, a gaming tourist city should spend the money generated from gaming activities to invest in non-gaming tourism facilities in

order to attract new visitors and generate a good word-of-mouth recommendation. The areas that could be selected for investment are myriad, but the experience of Macau has shown that the conservation of heritage sites and the inauguration of museums and art galleries, as well as the introduction of a variety of theatre types and performative venues, can enhance the overall tourism offer. Sporting fixtures, conferences and a variety of competitions and festivals can be added to this mix, though the introduction of these elements need to be considered strategically and how they contribute to the destination's image. The investment in developing non-gaming tourism activities enables the sustainable development of the tourism industry in Macau.

On the other hand, for the repeat-visit tourists, gaming tourism activities are important because their satisfaction with gaming tourism experiences will directly affect their intention to provide tourism word-of-mouth recommendation and interact with integrated satisfaction to affect their intention to provide tourism word-of-mouth too. Thus, operators of casino resorts should establish their operational strategies to enhance the quality and value of playing games for increasing tourist satisfaction with gaming tourism activities in their casino resorts. While the majority of gaming tourists appear to be content with established games, there is conceivably a market for novelty, not least with regard to the increasing creativity associated with information technology. By using big-data-driven marketing, the operators of casino resorts can predict the trends of gaming design for refining tourists' gaming experience. The operators of casino resorts may consider developing interactive robotic slot machines which can emotionally communicate with tourists and even can create a friendship with tourists by recognising their characteristics.

This study casts doubt on whether gaming tourism can be set against something called 'normal tourism' since its use would imply that gaming tourism is abnormal,

which it is not. The gaming tourism can boost tourism in general rather than setting up a binary opposition. Macau has a strength in having high reputation as gaming destination with integrated resorts, although facing a competition from other gaming destinations in Asia such as Singapore, in the sense of an ongoing tourism sector, the Macau government should continually adopt gaming tourism to support the diversification of attractions and tourism activities in order to develop Macau as a sustainable tourism destination.

Limitations and further studies

Although a systematic sampling was applied in this study, there still a limitation in the combination of samples. Since about half of the repeat-visit tourists have played games, this may be interpreted that half of the repeat-visit tourists are retained by previous gaming tourism experiences so they would like revisiting to Macau for satisfying these experiences. Unfortunately, no statistical data about the [percentage/](https://dataplus.macaotourism.gov.mo) or numbers of first-time visitors were disclosed from the government website (<https://dataplus.macaotourism.gov.mo>) and the sample size for first-time visitors is small in this study. Therefore, further studies are recommended for comparing the effects of gaming and non-gaming satisfactions on tourist behaviour for first-time visitors. Furthermore, further studies are recommended to compare the effects of gaming and non-gaming satisfactions on tourist behaviour between first-time, repeat, and frequent (≥ 10 in the last 2 years) visitors.

This research setting only tries to compare the effects of transaction-specific satisfactions with non-gaming and gaming tourism experiences on tourism word-of-mouth, so only tourists who have not played games could be excluded. But on another view, further study is recommended to include only gaming-oriented tourists in a sense to verify the effects of non-gaming activities for gaming-oriented tourists. Furthermore, for non-gaming tourism activities, they include several types of tourism

activities such as athletic events, spectacular shows, and **performances**. Further studies are recommended to have a deeper understanding of the effects of transaction-specific satisfactions with individual tourism activity and integrated satisfaction on tourist behaviour.

Macau is an ideal site for this research setting, since the majority of tourists to Macau are Chinese, **but** the findings may not be generalizable to other gaming tourist cities. Accordingly, additional studies in other countries are recommended to test its generalizability.

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Table 1. The concepts of overall satisfaction, transaction-specific satisfaction, integrated satisfaction, and attribute satisfaction

Terms	Concepts	Authors
Transaction-specific satisfaction studies		
Overall satisfaction	Overall satisfaction is an aggregation of all previous transaction-specific evaluations and is updated after each specific transaction.	Boulding, Kalra, Staelin, and Zeithaml (1993)
	Overall satisfaction refers to the customer's overall evaluation of a product or service provider to date.	Bitner and Hubbert (1994)
	Overall satisfaction is a moving average that is relatively stable and more similar to an overall attitude.	Parasuraman, Zeithaml, and Berry (1994)
	Overall satisfaction is the result of satisfaction with a series of transactions occurring during the service process	Johnston (1995)
	Overall satisfaction may be based on many transactions or just a few, depending on the number of times the customer has used a particular service provider. It is likely to remain relative stable.	Jones and Suh (2000)
Cumulative satisfaction	Cumulative satisfaction is a weighted average of transaction-specific satisfactions with the weights decaying geometrically as transactions go back in time.	Keiningham et al. (2014)
Transaction-specific satisfaction	Transaction-specific satisfaction refers to the consumer's satisfaction with a discrete product/service encountered.	Bitner and Hubbert (1994)
	Transaction-specific satisfaction refers to satisfaction with individual service transactions	Johnston (1995)
	Transaction-specific satisfaction is a customer's satisfaction or dissatisfaction with a single service encounter. It is likely to vary.	Jones and Suh (2000)
	Transaction-specific satisfaction is a satisfaction with a discrete transaction.	Keiningham et al. (2014)
	The transaction-specific satisfaction is measured in respect of the key elements of the service	Gao and Lai (2015)
	Transaction-specific satisfaction is a tourist's satisfaction with a type of tourism activities on a trip.	This study
Integrated	Integrated satisfaction refers to the overall satisfaction	Gao and Lai (2015)

satisfaction	with an entity which facilitates more than one product or service for the customers. Integrated satisfaction is the overall satisfaction with all the tourism activities experienced on a trip.	This study
Attribute satisfaction studies		
Attribute satisfaction	Attribute satisfaction is the consumer's subjective satisfaction judgment resulting from observations of attribute performance. Satisfaction with individual attribute. Satisfaction with resort attributes	Oliver (1993) Chi and Qu (2008) Hall, O'Mahony, and Gayler (2017)
Overall satisfaction	Overall satisfaction with a hospitality experience is a function of satisfactions with the individual elements or attributes of all the products/services that make up the experience. A summative overall measure of satisfaction. Overall satisfaction is the individual's subjective consumption evaluation that is based on all the elements associated with the experiences.	Pizam and Ellis (1999) Chi and Qu (2008) Philips et al. (2013)