

Profiling the Mainland Chinese Casinos Visitors Based on Gaming and Non-Gaming Expenditures: A case study of Macau

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Introduction

Macau, also known as the “Asian Las Vegas” or the “Monte Carlo of the Orient”, located on the Southeast Coast of China to the western bank of the Pearl River Delta, and is only 60 kilometers (kms) away from Hong Kong and 145 kms from the city of Guangzhou. Such exceptionally gifted location allows visitors from Mainland China, Hong Kong and other Asian countries and regions easy access to enjoy Macau’s gaming and tourism facilities. Macau has seen rapid

pressure of Macau’s casino and tourism marketers and stakeholders (Mitchell, 2011). In early 2010, two Integrated Resorts (IR) in Singapore, i.e., Resorts World Sentosa (RWS) and Marina Bay Sands (MBS), opened their doors and soon attracted many visitors from neighboring regions. It is therefore vital to examine the kinds of existing markets that have been captured by the various casino brands in Macau and derive winning strategies so as to sustain its development.

Macau received 21.7 million visitors in 2009, a slight decrease

Table 1

Number of casinos in Macau in 2004-2009

CONCESSIONAIRES	2004	2005	2006	2007	2008	2009			
						1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
S.J.M.	13	15	17	18	19	19	19	20	20
Galaxy Casino, S.A.	1	1	5	5	5	5	5	5	5
Venetian Macau, S.A.	1	1	1	2	3	3	3	3	3
Wynn Resorts (Macau) S.A.	-	-	1	1	1	1	1	1	1
Melco Crown Jogos (Macau) S.A.	-	-	-	1	2	2	3	3	3
MGM Grand Paradise, S.A.	-	-	-	1	1	1	1	1	1
TOTAL	15	17	24	28	31	31	32	33	33

Source: Gaming Inspection and Coordination Bureau, Macau SAR (2010)

development of casinos since its gaming liberalization in 2002. In 2009 the gaming industry in Macau employed 19.7% of the workforce and generates about 71.1% of the territory’s gross domestic product (GDP) [Statistics and Census Bureau (DSEC), 2010].

In mid-2008, Macau had **already generated more gaming revenues** than Las Vegas and Atlantic City combined (McCartney, 2008). Table 1 presents the number of casinos in Macau from 2004-2009.

Macau’s gaming development seems endless with Sands Macau adding new hotel rooms and Wynn Macau building Encore Macau, in addition to the mega constructions of many casinos on the Cotai Strip. Nevertheless, the increasing competitions from the neighboring regions such as Singapore, Vietnam and Taiwan which have been developing rapidly on the gaming business will further intensify the

of 5.15% compared to that in 2008 most likely due to the recent global financial crisis. However, the visitor arrivals number increased significantly from 11.9 million in 2003 after the first American style casino, Sands Macau, opened its door in June 2003, representing an annualized growth rate of 10.6% during the period 2003 to 2009 (DSEC, 2010). In particular, Mainland China has been Macau’s largest source market since the Chinese Government launched the Individual Visit Scheme (IVS) under the Closer Economic Partnership Agreement (CEPA) in June 2003, initially for residents of Beijing, Shanghai and eight provincial cities in Guangdong Province. While it was reported that in 2009, 79% of Mainland Chinese visitors to Macau claimed that their main purpose of visit was for “vacation” and interestingly only 5% “gaming” (DSEC, 2010), it is believed that the majority of the visitors have participated in some gaming per the researchers conversations with some casino executives in Macau and from the published news media.

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The importance of the Mainland Chinese market should not be overlooked and it would be wise for the stakeholders in the casino gaming and tourism industries to know better about this profitable market. The profile generated for gaming and non-gaming Mainland Chinese visitors in this study will benefit the future development of the gaming industry as well as the tourism industry in Macau. It is because of the fact that casino gaming environment is unique in that it combines gaming with associated operations such as food and beverage, entertainment, lodging and even shopping to make it more of a total recreational experience. To the researchers' best knowledge, there have been relatively few studies in the tourism literature about Mainland Chinese visitors' spending in casinos. In view of the recent profligate spending behaviour of the affluent Mainland visitors, the study attempted to identify the visitors' characteristics and spending pattern of the Mainland Chinese travelers in Macau. As Moufakkir (2002) pointed out that the understanding of consumers and their behavior is vital to the success of any business, and gaming is no exception.

Gu (2004) commented that Macau should maintain its market niche in the future and also develop its gaming industry in a more profitable way. He further argued that Macau should concentrate on gaming tourism to meet the strong demand of risk-taking Chinese gamblers and increasing its gaming revenue and gaming tax should be the priorities of Macau's gaming industry. This study particular examines Mainland Chinese visitors to Macau and identify the market segments for selected casinos in Macau. Based on the study results, marketers and stakeholders can tailor-make viable marketing strategies for their target gaming and nongaming customer segment groups. Research of the nature undertaken in this paper is important for the Macau tourism industry. Mainland Chinese visitors dominate the Macau inbound market making Macau's tourism industry highly susceptible to any factors that affect the Mainland Chinese outbound market. For instance, Beijing has progressively restricted the ease and frequency for Mainland Chinese visitors to travel to Macau in 2008. The tightening visa applications impacted the casinos revenues in Macau. According to the 2008 released data from Macau Gaming Inspection and Coordination Bureau, casino revenue fell 10.03 percent to 25.98 billion patacas in the third quarter, down from 28.88 billion patacas in the second quarter (Gough, 2008). The Mainland Chinese visa restriction can directly affect the market on gaming revenue.

Macau is the only region in China that allows legalized casino gaming, in recent years it has continued to support the tourism industry by committing resources to leisure tourism, business tourism and the aviation industry so as to maintain its competitive edge as an international destination. With a better understanding of the important source market better, informed decisions could be made so as to further vitalize its tourism industry as well as the casino gaming industry.

This study has the following five major objectives:

- To segregate the visitors' gaming and non-gaming expenditures into light, medium and heavy segments;
- To develop profiles of visitors based on their gaming expenditures and non-gaming expenditures segments;
- To compare and contrast the visitors' profiles developed for gaming and non-gaming expenditures;
- To explore the spending pattern of the light, medium and heavy segments on six major selected casinos;
- To explore the visitors' revisit intention to casinos
- To provide recommendations to the casinos marketers on marketing casinos to visitors.

This paper first reviews the literature on casino gaming and tourism in Macau, marketing segmentation and expenditure-based segmentation and revisit intention. Secondly, this paper displays data from a survey on tourist socio-demographic characteristics and segments the tourists on the basis of tourist expenditures data. Finally, marketing and management questions are posed based on the content of the case study.

Literature Review

Casino Gaming and Tourism in Macau

A number of casino gaming related studies have been carried out in the Macau context. Lio & Rody (2009) examined the emotional impact of casino servicescape among Chinese table gamblers and how this impact would further affect their approach/avoidance behavior. Through a "non-participatory" observation study, Lam (2007) observed and documented the psychology of Chinese baccarat players and found out that Chinese baccarat players appeared to derive monetary, excitement, entertainment and social values from playing baccarat. Lam (2007) also argued that Chinese believe that they can exercise more control on gambling outcomes on table games than slots or automated games. In Kim and Prideaux study (2005) on pleasure tourists' motivations in South Korea, they found Mainland Chinese tourists showed a high interest in leisure facilities and gaming in Korea, confirming that the number of Mainland Chinese tourists visiting Korea who want to participate in casino gambling is increasing. In another study on Mainland Chinese tourists, Kim, Cai and Jung (2004) investigates the socio-demographic characteristics and travel behavior patterns of Chinese casino visitors in South Korea. The profile of a typical Chinese casino visitor has a high income level, a low level of education, **no religious preference or believes in the traditional Chinese religion**. They travel with friends and colleagues, are in their 30s and 40s and tend to have a prior overseas travel experience. Findings from the above studies show why casinos both in Macau and South Korea have instilled local Chinese components in their product design and game mix to cater the Chinese market.

Analyzing financial competitiveness of Macau's gaming industry

with that of other gaming destinations such as North America and Europe, Gu (2006) argued that casinos in Macau must modify its casino product structure and revenue composition and pursue a more diversified market. While some casinos in Macau have tried to offer other business and entertainment product and services such as MICE, concerts, shows, and etc., it cannot be denied that gaming receipts from Mainland Chinese is probably still the strongest revenue generators for casinos in Macau. In helping casinos in Macau to encourage gaming participation and raise gaming revenues, Gu (2007) proposed that they should increase maximum bet limits, raise subjective winning probability, and adjust game holds. Nevertheless, he cautioned that the Las Vegas-style comp-centered casino promotion should be avoided.

On the societal aspect, Fong & Ozorio (2005) estimated gambling participation and prevalence of Macau residents and found that two-thirds of the 1,121 respondents participated in at least one form of gambling in the immediate past year. Furthermore, 1.78% of respondents could be classified as probable pathological gamblers and 2.5% as probable problem gamblers. A number of studies on Macau residents' perception and attitudes on gaming and its impact have also been carried out (Vong, 2004; Vong, 2005; Vong, 2008; Vong, 2009). Gaming operators' social responsibility from the perspectives of teachers and students was also studied (Vong, 2010).

Market segmentation and Expenditure-based segmentation

Segmentation has been practiced in the casino industry including Macau; most likely at the property level. Market segmentation has four major advantages, they are namely: (1) providing the base for target marketing; (2) supporting the development of more effective marketing mixes in order to satisfy the needs of specific visitors segments; (3) facilitating destination differentiation; and (4) providing easier identification of market opportunities and threats (Satish and Menezes, 2001).

Expenditure-based segmentation demonstrates all of the unique characteristics of market segmentation such as measurability, accessibility, substantiality and actionability (Spotts & Mahoney, 1991; Pizam & Reichel, 1979). Mok and Iverson (2000) applied expenditure based segmentation on Taiwanese tourists to Guam, the heavy spenders were found to be distinguishable from the other segments in terms of age, party size, length of stay, trip purpose, travel mode and their spending pattern. In a recent study in Australia, Wang and Davidson (2010) suggested that an expenditure based segmentation of the Chinese holiday market to Australia may be feasible. No study is conducted in Asian destination on Chinese tourists' spending behavior, in particular, the travel expenditures incurred. This study fills the literature void in exploring the different segments of Mainland Chinese gaming visitors in Macau.

In comparing the total trip expenditures of business travelers and pleasure travelers from Europe, North America and Japan in South

Korea, business travelers irrespective to origin spent more than leisure travelers (Suh and McAvoy, 2005). In another study related to purpose of trip and expenditures, cultural attendees in Orlando had higher incomes, were older and had higher expenditure on food and shopping compared to casual leisure visitors (McHone and Rungeling, 1999). In a segmentation study on cruise ship passengers, Petrick (2004) identified three groups of passengers' categories based on their price sensitivity: "low sensitives", "moderate sensitives" and "high sensitives". Characteristics of "low sensitives" were less price sensitive, had higher incomes and comparatively spent more.

Moufakkir, Singh, Moufakkir-van der and Holecek (2004) studied visitors to two commercial casinos in the United States. The sample of visitors was divided into light, medium and heavy spenders based on their total non-gaming spending. Even though their findings indicated that a large number of heavy spending tourists were not interested in gaming, the study does not provide sufficient information on gaming expenditures let alone the characteristics of gaming-visitors. As the study was conducted in the United States to Americans, the findings cannot be generalized to the Asian market. The present study divides a sample of visitors into light, medium and heavy spenders on gaming and non-gaming in the Asian context.

Revisit intention

Numerous studies have examined the factors influencing revisit intention. Huang S. and Hsu C.H.C. (2009) telephone interviewed 501 residents in Beijing to examine the effects of mainland Chinese visitors' travel motivation, past experience, perceived constraints, and attitude on their intention of revisiting Hong Kong. Their findings indicate that shopping as a motivating factor positively affected Beijing tourists' revisit intention to Hong Kong. Also past experience has positive influence on revisit intention. The present study uses a different measurement on revisit intention, mainly two direct questions were utilized to study the plan of visitors to revisit or whether there is a high possibility that they will revisit Macau casinos. Petrick, Morais and Norman (2001) found that past behavior, satisfaction, and perceived value are good predictors of entertainment vacationers' intention to revisit the destination.

McDougall and Munro (1994) noted that even if tourists are satisfied, they may seek new experiences or new destination for each holiday as a means of seeking variety. Hence, tourists' satisfaction with a destination alone might not be a sole factor to influence them to return to the destination. Prior exploring their intention to return, probably a direct respond from the visitors can give indication to marketers on the effort and resources needed to attract repeat visitors.

Repurchase or revisit intention can be influenced by another important factor, i.e., past experience. Past experience mainly refers to the number of previous visits (Yuan et al., 2008). For example, Sonmez and Graefe (1998), and Yuan et al. (2008) all adopted a simple approach to their research by using the number of trips as the indicator

of past experience. Much literature has reported that variables of past experience or past behavior as being contributing factors and essential antecedents to consumer revisit or repurchase intentions (Gyte & Phelps, 1989; Juaneda, 1996; Petrick et al., 2001; Sonmez & Graefe, 1998; Gomez-Jacinto et al., 1999; Lam and Hsu, 2004; Yuan et al., 2008; Huang & Hsu, 2009). Especially, Mazursky (1989) stated that compared to information acquired from external sources, past experience may even exert much more influence on revisit decisions. Kozak (2001) emphasized in his study that repeaters tend to have a higher intention to revisit a destination where they had been before than non-repeaters.

Methodology

The study adopted a convenience sampling method for its efficiency in time and money. The survey interviews took place in early December 2008 in Macau. The choice of survey locations are deemed suitable as found in the pilot test conducted a month prior the actual survey. A total of six different locations were selected in the areas outside six branded casinos, namely, Venetian, Wynn, Grand Lisboa, Star World, MGM Grand and Crown. These six casinos were regarded to be the most representative casinos for the six gaming concessionaires, respectively, in Macau in attracting a large number of visitors. As a result, the target respondents can most likely capture those who are mainland Chinese visitors to Macau. In order to ensure a high response rate, each respondent was given a small souvenir upon the completion of the questionnaire.

The survey administrators included seven undergraduate students who were trained prior conducting the interviews. They understood very well the purpose of the study and the questions asked. The questionnaire consisted of three sections. The first section covers pre-screening questions to identify those who are mainland Chinese respondents and have been to casinos in Macau in the past 12 months. A question on the following section of the questionnaire is based on their most recent casino experience. The second and third sections included questions related to another survey study. Section four consisted of questions designed to gather information about visitors' total expenditures on gaming and non-gaming in their recent trips to Macau, likelihood to revisit casinos and demographic information.

Data cleansing work was conducted to delete invalid responses. As a consequence, 504 out of 700 questionnaires collected were found useful for data analyses, a valid response rate of 72%. The analysis of results included segregating the visitors arbitrarily in proportion to three predetermined levels of frequency distributions based on the amount of their expenditures on gaming and non-gaming. Lower third segment were defined as light gaming/non-gaming segments, middle third segment were defined as medium gaming/non-gaming segments and the upper third segment were defined as heavy gaming/non-gaming segments. The three segments of gaming and non-gaming were further analyzed respectively by using different descriptive

statistics and chi-square statistics.

Findings and Discussions

There were altogether 504 Mainland Chinese visitors interviewed outside the six identified casinos and served as the sample of this study. As shown in table 2, these participants consisted of 45% male and 55% female. About 25.5% were 18-29 years of age and majority of them (62.8%) were between the age range of 30-49 years; about 11.7% were over the age of 50. More than 30% had less than high school education, about 39.1% had senior high school education and more than 31.6% had college/university or above education. In terms of monthly income, more than 53.8% had income below RMB5,000. About 37%

Table 2
General visitor profile

N=506	%
Gender	
Male	45.0
Female	55.0
Age	
18-29	25.5
30-39	30.6
40-49	32.2
50-59	11.7
Education Level	
Less than high school	30.0
Senior high school	39.1
College/University or above	31.6
Missing Data	0.4
Monthly Income	
Below ¥ 5,000	53.8
¥ 5,001 - ¥ 10,000	25.7
¥ 10,001 - ¥ 15,000	11.3
¥ 15,001 - ¥ 20,000	4.0
¥ 20,001 +	5.1
Missing Data	0.2

had income between RMB5,001 - RMB15,000 and around 9.1% had income higher than RMB15,001.

Based on the gaming expenditures of casino visitors as shown in table 3, they were divided into three major categories as light gaming segment (LGS), medium gaming segment (MLS) and heavy gaming segment (HGS). Likewise, casino visitors, based on their non-gaming expenditures, were divided into three categories as light non-gaming segment (LNGS), medium non-gaming segment (MNGS) and heavy non-gaming segment (HNGS). On average each visitor's spending on non-gaming (HK\$3,476) (HK\$1=US\$7.8) was higher than gaming (HK\$3,227). In addition, comparing the spending of the three segmented groups on gaming and non-gaming, LGS spent more on

Table 3

Comparative Trip Expenditures of Light-Medium-Heavy Casino Visitors

Segment	Frequency	Total Spending	Percentage
Gaming Expenditures (mean = HK\$3227) (HK\$1=US\$7.8)			
Light	171 (33.8%)	HK\$ 85355	5.2
Medium	159 (31.4%)	213724	13.1
Heavy	174 (34.4%)	1327266	81.6
Total	504 (99.6%)*	1626345	99.9
Non-gaming Expenditures (mean = HK\$3476) (HK\$1=US\$7.8)			
Light	166 (32.8%)	55386	3.1
Medium	170 (33.6%)	272434	15.5
Heavy	168 (33.2%)	1424458	81.3
Total	504 (99.6%)*	1752278	99.9

*Missing data 0.4%

gaming than LNGS, whereas the other gaming groups spent more on non-gaming. It appears that the LGS are comparatively more willing to spend more on gaming than non-gaming.

One interesting result emerges indicating the heavy spending

groups for non-gaming and gaming dominated the whole segment respectively. Heavy non-gaming group constitutes 81.6 % of the total spending and heavy gaming group constitutes 81.3% of the total spending. It indicates that the VIP market is very profitable in the gaming business. Previous researchers have revealed that heavy users of consumer products/services account for the large proportion of sales (Mok and Iverson, 2000; Rhim and Cooper, 2005; Solomon, Bamossy and Askegaard, 2002; Woodside, Cook and Mindak, 1987). Marketers need to pay special attention to the heavy spenders groups both for gaming and non-gaming; they may need different sets of marketing mix strategies or more personalized marketing strategies.

In analyzing the spending pattern of the three gaming and non-gaming segments in relation to their demographic characteristics, there were significant differences found among the three gaming segments in terms of age ($\chi^2 = 25.746, p < 0.05$), gender ($\chi^2 = 35.046, p < 0.05$), education level ($\chi^2 = 21.447, p < 0.05$), and income ($\chi^2 = 62.428, p < 0.05$); the demographic characteristics of the three non-gaming segments showed statistical differences in age ($\chi^2 = 24.479, p < 0.05$), education ($\chi^2 = 13.943, p < 0.05$), and income ($\chi^2 = 85.021, p < 0.05$), except for gender ($\chi^2 = 1.717, p > 0.05$).

As shown in table 4, majority of the LGS (57.9%) and HGS (70.2%) were in their 30s/40s, whereas the MGS was at a younger age range of 18-39 (66.1%). This result of different age groups emerged from different segments differs from previous studies with regards to the re-

Table 4

Market segment by demographic variables

Variable	Total sample	Gaming expenditures segments			Chi square	Sig.	Non-gaming expenditures segments			Chi square	Sig.
		Light	Medium	Heavy			Light	Medium	Heavy		
	N = 504	N = 171	N = 159	N = 174			N = 166	N = 170	N = 168		
Age											
18 – 29		28.7%	34.0%	14.4%	25.746	0.000	19.9%	33.5%	22.6%	24.479	0.000
30 – 39		24.6	32.1	35.1			22.9	32.9	35.7		
40 – 49		33.3	28.3	35.1			39.8	25.3	32.1		
50 – 59 or above		13.5	5.7	15.5			17.5	8.2	9.5		
Gender					35.046	0.000				1.717	0.424
Male		28.7%	44.7%	60.3%			47.0%	40.6%	46.4%		
Female		71.3	55.3	39.7	53.0	59.4	53.6				
	N = 502	N = 169	N = 159	N = 174			N = 165	N = 169	N = 168		
Education Level					21.447	0.000				13.843	0.008
Less than high school		33.1%	18.9%	37.9%			33.9%	36.7%	20.2%		
Senior high school		37.3	39.6	40.2			37.6	37.9	41.7		
College/University or above		29.6	41.5	21.8			28.5	25.4	38.1		
	N = 503	N = 171	N = 159	N = 173			N = 166	N = 169	N = 168		
Monthly Income					62.428	0.000				85.021	0.000
Below ¥ 5,000		71.3%	51.6%	38.2%			69.9%	63.3%	28.0%		
¥ 5,001 – ¥ 10,000		19.9	26.4	31.2			21.7	20.7	35.1		
¥ 10,001 – ¥ 15,000		5.8	15.7	12.7			4.8	11.8	17.3		
¥ 15,001 – ¥ 20,000		0.6	5.7	5.8			3.0	1.8	7.1		
¥ 20,001 +		2.3	0.6	12.1	0.6	2.4	12.5				

Table 5

Market segment by revisit intention variables

Variable	Total sample	Gaming expenditures segments			Chi square	Sig.	Non-gaming expenditures segments			Chi square	Sig.
		Light	Medium	Heavy			Light	Medium	Heavy		
	N = 503	N = 171	N = 159	N = 173			N = 166	N = 169	N = 168		
<i>I plan to visit this casino again</i>											
Disagree		4.7%	3.8%	3.5%	14.759	0.064	1.8%	4.1%	6.0%	15.093	0.057
Somewhat disagree		11.7	3.8	8.1			6.0	10.7	7.1		
Neutral		26.3	19.5	26.0			25.3	26.0	20.8		
Somewhat agree		28.1	42.8	31.2			28.9	36.1	36.3		
Agree		29.2	30.2	31.2			38.0	23.1	29.8		
	N = 504	N = 171	N = 159	N = 174			N = 166	N = 170	N = 168		
<i>The probability is high that I would visit this casino</i>											
Disagree*					5.765	0.674				18.853	0.016
Somewhat disagree		2.9%	1.9%	2.9%			2.4%	1.8%	3.6%		
Neutral		7.0	5.7	6.3			3.0	9.4	6.5		
Somewhat agree		29.8	22.0	22.4			22.3	32.4	19.6		
Agree		28.7	35.8	30.5			31.3	30.6	32.7		
		31.6	34.6	37.9	41.0	25.9	37.5				

*each of the expenditure segment has 3 cells (20.0%) have expected count less than 5.

relationship between age and tourist expenditure (Agarwal and Yochum, 1999; Leones, Colby and Crandall, 1998). In terms of gender, majority of the LGS were females (71.3%) and it appears to have an even distribution of male (44.7%) and female (55.3%) in the MGS. In the HGS, majority of them were males (60.3%). The statistical gender differences found among the three gaming segments differ from previous studies (Agarwal and Yochum, 2000; Jang, Bai, Hong and O’Leary, 2004) that proved gender was not associated with the level of spending. The education level of LGS (70.4%) and HGS (78.1%) was less than high school or senior high school, whereas MGS had a higher education of senior high school, college/university or above (81.1%). The monthly income of LGS had 71.3% at the level around RMB5,000 or below. MGS monthly income was slightly higher than LGS at the level around RMB10,000 or below. HGS monthly income was the highest among the three segments with 61% in the level around RMB5,001+ to 20,000.

In respect to the non-gaming expenditures segments, majority of the LNGS (62.79%) and HNGS (67.8%) were in their 30s/40s, whereas the MNGS was at a younger age range of 18-39 (66.4%). In terms of gender, there were no statistical differences found among the three groups; it appears to have an even distribution of male and female in these three non-gaming groups. The education level of LNGS (71.5%) and MNGS (74.6%) was less than high school or senior high school, whereas HNGS had the highest education of senior high school, college/university or above (79.8%). The majority of monthly income of LNGS had 91.6% at the level below RMB10,000. MNGS monthly income was higher than LNGS with majority income (95.8%) less than RMB15,000. HNGS monthly income was the highest among the three

segments with 36.9% at the level around RMB10,001+ to 20,000.

Table 5 shows the results of revisit intention of the different market segment groups. There appears to have no significant differences ($\chi^2 = 14.759, p > 0.05$) for the three gaming expenditures groups on their plans to visit the casinos again. Even when asked the high probability to visit that casino, there appears to have no significant differences ($\chi^2 = 5.765, p > 0.05$) either. Overall, there was high intention to revisit the casinos. In comparing the non-gaming expenditures group, there were no differences in their plans to visit the casinos again ($\chi^2 = 15.093, p > 0.05$). However, there appears to have significant differences in the high probability to visit that casino ($\chi^2 = 18.853, p < 0.05$). The LNGS and the HNGS had higher possibility to visit that casino again compared to the MNGS who were mostly neutral (32.4%) or agree/somewhat agree (30.6%/25.9%) to visit the casinos again. More than 72.3% and 70.2% of the respective LNGS and HNGS indicated agree/somewhat agree to the high probability to visit that casino again.

Based on the results of recent visits of the gaming and non-gaming market segments to the six casinos, as shown in table 6, under the gaming expenditures groups, Crown (23.4%), Wynn (21.1%) and Venetian (17%) were able to capture the light gaming visitors. For the medium gaming spending group, Grand Lisboa (30.2%) was able to capture this market. Grand Lisboa (23.6%) also appeared to outperform other casino groups in capturing the heavy gaming segment group too. Nevertheless, Grand Lisboa was able to attract 47.6% of the low non-gaming expenditure group. Crown, Wynn and Venetian were also able to attract a total of 56.4% medium non-gaming groups and

Table 6

Market segments of gaming and non-gaming for six casinos based on the most recent visit

Casinos recently visited	Total sample	Gaming expenditures segments			Chi square	Sig.	Non-gaming expenditures segments			Chi square	Sig.
		Light	Medium	Heavy			Light	Medium	Heavy		
	N = 504	N = 171	N = 159	N = 174			N = 166	N = 170	N = 168		
Star World		12.9%	11.3%	17.8%	35.203	0.000	12.0%	14.1%	16.1%	107.40	0.000
Wynn		21.1	13.8	21.3			21.1	18.2	17.3		
MGM		9.9	13.2	13.2			7.2	17.6	11.3		
Venetian		17.0	18.2	19.0			6.0	20.6	27.4		
Grand Lisboa		15.8	30.2	23.6			47.6	11.8	10.1		
Crown		23.4	13.2	5.2			6.0	17.6	17.9		

62.6% of heavy non-gaming segment groups.

The above results indicate that Grand Lisboa was able to attract those who spent less on non-gaming but more on gaming, whereas Crown, Wynn and Venetian were able to attract those spending less on gaming but more on non-gaming. It might be due to the fact that these new casinos had introduced relatively more entertainment facilities which “required” the visitors to spend more on non-gaming activities besides gaming in casinos.

Conclusions

The profiles of the gaming and non-gaming visitors are generated to reveal a depiction of the existing Macau visitors’ market. Light, medium and heavy gaming expenditures and non-gaming expenditures segments are created. The characteristics of each of the segregated gaming expenditures segments are quite unique. The light gaming group members are mostly female, in the age groups of 30/40s, have the lowest education and personal income. The medium gaming group members have an even distribution of males and females, they are either young people in the age groups of 18-29 or 30-39, completed senior high school or college, the highest education level among the gaming groups and the second highest personal monthly income group. The heavy gaming group members are mostly males, in the age groups of 30s/40s, have lower education but the highest personal income. This profile coincide with Zeng and Forrest (2009) study in profiling high rollers from Mainland China.

In relation to the distinctive characteristics of the non-gaming expenditures segments, the three groups have a fair distribution of males and females, the light non-gaming group members are mostly in the age groups of 30/40s, have less than high school or completed senior high school education and the lowest personal income. The medium non-gaming group similar to the medium gaming group in terms of age and income, are either young people in the age groups of 18-29 or 30-39, have less than high school or completed senior high

school education and the second highest personal monthly income. The heavy non-gaming members are mostly in the age groups of 30/40s, have the highest level of education and the highest personal income. Since the identified segments generated from this study are distinct, it would be beneficial to marketers to understand more about the meaning of the demographics and how they relate to expenditures segmentation. Using the profile’s information to target the right market or even to reposition themselves for the identified segments.

The study results also revealed that heavy spending groups dominate the markets of gaming and non-gaming; marketers need to think about how to sustain or please this market without alienating other market groups. Even though purchase size has always been encouraged by casinos marketing, knowing the demographics and the needs and wants of the medium and light spending groups are also essential and beneficial. This will give marketers opportunities to create new strategies that can influence them to become heavy spending groups.

The finding of the study revealed that average visitor’s spending on non gaming (HK\$3,476) was higher than gaming (HK\$3,227), the means difference is about 7%. It revealed that gaming revenues and non gaming revenues generated from Mainland Chinese visitors did not exist a big difference. In other words, on average gaming revenues are comparable to non-gaming revenues. The stereotype that Mainland Chinese visitors spend much more on gaming than non-gaming may no longer be true. Marketers should tap into the expenditure information in this study as well as visitors’ demographic information of age, gender and income in developing their future marketing plan.

Questions for Discussions

- How different are the performances of the Asia Pacific based casinos and the US based casinos in capturing the different segment groups? At what target market would the Asia Pacific based casinos and the US based casinos aim in their marketing strategies? Why?

- Will Macau face the same problems such as overbuilding and a severe financial crisis in their future that Las Vegas faces today? Should they diversify their economy more by not putting too many “gaming eggs” in one basket to spread the risk?
- How might the expanding Asia cruise industry impact Macau and gaming in the future? Discuss what other types of gaming activities/venues could be threat to the development of Macau’s casino industry?
- In your opinion, what are the managerial implications for this study?
- What are the limitations of this study? How can the study method be improved? What advice might you have for the Macau Destination Management Office?

References

- Agarwal, V.B. and Yochum, G.R. (1999). Tourist spending and race of visitors. *Journal Travel Research*, 38: 173-176.
- DSEC (2010). *Survey on manpower needs and wages for the second quarter 2010- gaming industry*. Statistics and Census Service Macao SAR Government. <http://www.dsec.gov.mo/Statistic/LabourAndEmployment/SurveyOnManpowerNeedsAndWages-GamingIndustry/SurveyOnManpowerNeedsAndWages-GamingIndustry2010Q2.aspx>. [Accessed the 24th of June 2011].
- Fong, D.K.C. and Ozorio, B. (2005). Gambling participation and prevalence estimates of pathological gambling in a Far-East gambling city: Macao. *UNLV Gaming Research & Review Journal*, 9(2): 15-28.
- Gomez-Jacinto, L., Martin-Garcia, J.S. and Bertiche-Haud’Huyze, C. (1999). A Model of Tourism Experience and Attitude Change. *Annals of Tourism Research*, 26(4): 1024–1027.
- Gough, N. (20-October-2008). Macau casino revenue falls for second quarter. South China Morning Post. BIZ2, BIZ. [http://prd7-libwisearch.wisers.net/ws5/tool.do?wp_dispatch=confirm-view&doc-ids=news:1472^200810200270515\(S:77678194\)&menu-id=&on-what=selected&from-list&display-style=all&tooldisplay=true](http://prd7-libwisearch.wisers.net/ws5/tool.do?wp_dispatch=confirm-view&doc-ids=news:1472^200810200270515(S:77678194)&menu-id=&on-what=selected&from-list&display-style=all&tooldisplay=true). [Accessed the 24th of June 2011].
- Gu, Z. (2004) Macau gaming: copying the Las Vegas style or creating a Macau model? *Asia Pacific Journal of Tourism Research*, 9(1): 89-96.
- Gu, Z. (2006). Financial competitiveness of Macau in comparison with other gaming destinations. *UNLV Gaming Research & Review Journal*, 10(2): 1-12.
- Gu, Z. (2007). Which way to go? Analysis of gaming revenue enhancement approaches for Macau. *Journal of Revenue and Pricing Management*, 6(1): 33-39.
- Gyte, D.M. and Phelps, A. (1989). Patterns of Destination Repeat Business: British Tourists in Mallorca, Spain. *Journal of Travel Research*, 28(Summer): 24-28.
- Huang, S.S. and Hsu, C.H.C. (2009). Effects of travel motivation, past experience, perceived constraint, and attitude on revisit intention. *Journal of Travel Research*, 48(1): 29-44.
- Jang, S.C., Bail, B., Hong, G.S. and O’Leary, J.T. (2004). Understanding travel expenditures patterns: A study of Japanese pleasure travelers to the United States by income level. *Tourism Management*, 25: 335-346.
- Juaneda, C. (1996). Estimating the Probability of Return Visits Using a Survey of Tourist Expenditure in the Balearic Islands. *Tourism Economics*, 2(4): 339-352.
- Kim, S.S. and Prideaux, B. (2005). Marketing implications arising from a comparative study of international pleasure tourist motivations and other travel related characteristics of visitors to Korea. *Tourism Management*, 26, 347-357.
- Kim, W.G., Cai, L.A. and Jung, K. (2004). A profile of the Chinese casino vacationer to South Korea. *Journal of Hospitality Marketing and Management*, 11(2&3): 65-79.
- Kozak, M. (2001). Repeaters’ Behavior at two Distinct Destinations. *Annals of Tourism Research*, 28(3): 785-808.
- Lam, D. (2007). An observation study of Chinese baccarat players. *UNLV Gaming Research & Review Journal*, 11(2), 63-73.
- Lam, T. and Hsu, C.H.C. (2004). Theory of Planned Behavior: Potential Travelers from China. *Journal of Hospitality & Tourism Research*, 28(4): 463–482.
- Leones, J., Colby, B. and Crandall, K. (1998). Tracking expenditures of the elusive nature tourists of Southeastern Arizona. *Journal of Travel Research*, 36(3): 56-64.
- Lio, H.L.M. and Rody, R. (2009). The emotional impact of casino servicescape. *UNLV Gaming Research & Review Journal*, 13(2): 17-25.
- Mazursky, D. (1989). Past Experience and Future Tourism Decisions. *Annals of Tourism Research*, 16(3): 333–344.
- McCartney, G. (2008). The CAT (Casino Tourism) and the MICE (Meetings, Incentives, Conventions, Exhibitions): Key development considerations for the Convention and Exhibition industry in Macao. *Journal of Convention & Event Tourism*. 9(4): 293-308.
- McDougall, G.H.G. and Munro H. (1994). Scaling and attitude measurement in travel and tourism research. In J. R. B.Ritchie and C. R. Goeldner (Eds.), *Travel and Hospitality Research: A Handbook for Managers and Researchers* (pp. 115-129). Chichester, UK: Wiley.
- McHone, W.W. and Rungeling, B. (1999). Special cultural events: Do they attract leisure tourists? *International Journal of Hospitality Management*, 18(2): 215-219.
- Mok, C. and Iverson, T.J. (2000). Expenditure-based segmentation: Taiwanese tourists to Guam. *Tourism Management*, 21: 299-305.
- Mitchell, A. (2011). Macau casino revenue up 42.4% to \$3 billion in May 2011. <http://www.onlinepoker.net/poker-news/casino-news/macau-casino-revenue-424-3-billion-2011/10902>. [Accessed the 24th of June 2011].
- Moufakkir, O. (2002). Changes in selected economic and social indicators associated with the establishment of casinos in the city of Detroit. Dissertation. Michigan State University, East Lansing, Michigan.
- Moufakkir, O., Singh, A.J., Moufakkir-van der Woud, A. and Holecek, D.F. (2004). Impact of light, medium and heavy spenders on casino destinations: Segmenting gaming visitors based on amount of non-gaming expenditures. *UNLV Gaming Research and Review Journal*, 8(1): 59-71.
- Petrick, J.F., Morais, D.D. and Norman, W.C. (2001). An examination of the determinants of entertainment vacationers’ intentions to revisit. *Journal of Travel Research*, August, 40(1): 41-48.
- Pizam, A. and Reichel, A. (1979). Big spenders and little spenders in US tourism. *Journal of Travel Research*, 18(1): 42-43.
- Rhim, H. and Cooper, L.G. (2005). Assessing potential threats to incumbent brands: New product positioning under price competition in a multi-segmented market. *International Journal of Research in Marketing*, 22: 159-182.
- Satish, C. and Menezes, D. (2001). Applications of multivariate analysis in international tourism research: The marketing strategy perspective of NTOs. *Journal of Economic and Social Research*, 3(1): 77-98.
- Spotts, D.M. and Mahoney, E.M. (1991). Segmenting visitors to a destination region based on the volume of their expenditures. *Journal of Travel Research*, 29(4): 24-31.
- Solomon, M., Bamossy, G. and Askegaard, S. (2002). *Consumer Behaviour: A European perspective*. Harlow, UK, FT: Prentice Hall.
- Sonmez, S.F. and Graefe, A.R. (1998). Determining Future Travel Behavior from Past Travel Experience and Perceptions of Risk and Safety. *Journal of Travel Research*, 37(2): 171–177.
- Statistics and Census Bureau (2010). Statistics. <http://www.dsec.gov.mo/Statistic.aspx?lang=en-US>. [Accessed the 24th of June 2011].
- Suh, Y.K. and McAvoy, L. (2005). Preferences and trip expenditures – a conjoint

analysis of visitors in Seoul, Korea. *Tourism Management*, 26: 325-333.

Vong, F. (2004). Gaming attitudes and gaming behavior of residents of Macao: The Monte Carlo of the orient. *Journal of Travel Research*, 42(3): 271-278.

Vong, F. (2005). Mapping resident perceptions of gaming impact. *Journal of Travel Research*, 44(2): 177-187.

Vong, F. (2008). Influence of personal factors on Macau residents' gaming impact perceptions. *UNLV Gaming Research & Review Journal*, 12(1/2): 15-28.

Vong, F. (2009). Changes in residents' gaming attitudes and perceived impacts at the fifth anniversary of Macao's gaming deregulation. *Journal of Travel Research*, 47(3): 388-397.

Vong, F. (2010). Perception of Macao teachers and students regarding gaming operators' social responsibility. *UNLV Gaming Research & Review Journal*, 14(1): 1-13.

Wang, Y. and Davidson, M.C.G. (2010). Chinese holiday makers' expenditure: Implications for marketing and management. *Journal of Hospitality Marketing and Management*, 19(4): 373-396.

Woodside, A.G., Cook, J.R. V.J. and Mindak, W.A. (1987). Profiling the heavy traveler segment. *Journal of Travel Research*, 25(4): 9-14.

Yuan, J.X., Morrison, A.M., Cai, L.P. and Linton, S. (2008). A model of wine tourist behavior: A festival approach. *International Journal of Tourism Research*, 10: 207-219.

Zeng, Z. and Forrest, D. (2009). High rollers from Mainland China: A profile based on 99 cases. *UNLV Gaming Research and Review Journal*, 13(1): 29-43.

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