

## **EXAMINING THE PERSPECTIVES AND PARTICIPATIONS OF LOCAL RESIDENTS TOWARD GAMBLING IN MACAU AND SINGAPORE**

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### **ABSTRACT**

This study utilizes the viewpoints of Macau and Singapore residents to examine (1) the differences of residents' attitudes, cognitions, and behaviors toward gambling; and (2) what the determinate factors of influencing residents' participations in gambling activities in casinos are. This study collected 416 (Macau) and 409 (Singapore) survey responses during March and June, 2013. The results revealed that, with exception of two variables "Do you understand the natures of casino jobs" and "Have you any work experience in a casino", there are certain degrees no significant differences of residents' attitudes, cognitions, and behaviors towards gambling in both regions. In addition, the most crucial factor of influencing residents to participate in gambling behaviors is the perspective "What is your opinion to gambling behaviors?" Regarding to the control variable, "Marital status" and "Gender" were chosen as the crucial influential factors by Macau and Singapore residents respectively.

**Keywords:** gambling participation, residents' social attributes, Macau, Singapore, casinos

### **1. INTRODUCTION**

Researchers from different disciplines have attempted to examine the cause-and-effect relationships and other complex phenomena involved in gambling and have arrived at varied results. However, many gambling studies or gambling-related studies have attempted to examine the phenomenon or treatment of pathological gamblers (Zola, 2006), and only a few studies have focused on non-pathological or non-problem gamblers (Fong & Ozorio, 2005). In fact, gambling is a sophisticated phenomenon, and researchers should not assume a one-dimensional perspective or concentrate their research interests only on issues related to pathological/problem gamblers (McMillen, 1996). Indeed, gambling itself could be treated as both of subjective experience and

socio-cultural activity (Cosgrave, 2006), so that the subjects of gambling studies should be more extensive and multi-dimensional.

Tao, Wu, Cheung, & Tong (2011) suggested that gambling behavior is influenced by motivation, cognition, and attitude. From the domain of social psychology, the famous equation of field theory,  $B$  (behavior) =  $f$  (P, E), explains human behavior as the mutual interactive product of individual characteristics and the psychological environment. As many studies have shown, gambling among Chinese people across different communities is consistently highly prevalent because of their strong beliefs in the illusion of control, *feng shui*, and superstitious belief in pre-destined fate (Tao *et al.*, 2011).

The contemporary casino business is a unique industry (Gu, 2004), there are even certain researchers who defined the socio-economic networks that are formed by the gaming, resorts, shopping, and entertainment industries in Las Vegas and Macau as “casinopolitanism” (Luke, 2011). Conversely, Singapore has been an up-and-coming market for the gaming industry: its first casino opened in 2010. Since its opening, the casinos in Singapore immediately attracted a large crowd of visitors and also earned considerable tourism revenues (Kale & De, 2013). Macau and Singapore represent two different characters in the gaming business, and these are also the only two places that are permitted to run legalized casino gambling in areas where the majority of residents are of a Chinese ethnicity. Therefore, this study aims to explore the following issues: (1) Are there significant differences of local residents' attitudes, cognitions, and behaviors toward gambling in Macau and Singapore? (2) Do the social backgrounds (especially working experiences in casino gambling and occupational attribute) of local residents play determinant roles to make the distinctive differences of their attitudes, cognitions, and behaviors toward gambling? And (3) what are the most crucial factors to influence the residents' participations in gambling activities?

## **2. LITERATURE REVIEW**

Developed by Icek Ajzen, the theory of planned behavior primarily aims to explicate the formation of a behavioral intention and then utilizes such behavioral intention to effectively predict how actual behavior would be performed. In other words, human behavior is guided by behavior beliefs, normative beliefs, and control beliefs (Chien, Yen, & Hoang, 2012). Similar to Icek Ajzen's theoretical emphasis on the influence of attitude, subjective cognition, and control with respect to human behaviors, Tao *et al.* (2011) identified the mutually interlocked relationship among motivation, cognitive-based attitude, and behavior. Applied to gambling studies, King, Delfabbro, Kaptsis, & Zwaans (2014) suggested that youth with a strong interest in gambling are more likely to gamble through the use of simulated forms of digital and social media. Here, youth with a “strong interest” in gambling are youth with a positive attitude toward

and belief in gambling such that this belief would motivate them to be involved with and stimulated by gambling activities in digital and social media. Tao *et al.* (2011) explicated that many studies have found the prevalence rate of gambling among the Chinese in different communities was constantly high, and the reasons for this behavioral tendency come from stronger beliefs in superstitions regarding fate, illusion of control, and less probabilistic thinking within Chinese perceptual system of culture. Otherwise, the collective behavioral propensity could be extensively and predominately influenced by the enculturized process of externally socio-cultural environments. By examining the traditional VIP casino system – whose persistent existence in Macau exhibits the significance of a particularly culture-loaded keystone – Wuyi Wang & Peter Zabielskis (2010) declare that the cultural-psychological “love of gambling” in Chinese societies has provided the predominant contributions to the systematic success of traditional VIP rooms. For many years, VIP rooms have contributed almost 70 percent of gambling revenue in Macau (Wang, 2005). This specific kind of culture-driven loving in highly risky gambling can undoubtedly clarify why the Chinese prefer playing thrilling baccarat tables to enjoying boring slot machines (Wang & Zabielskis, 2010).

Adapted from concepts in the physical sciences, Kurt Lewin, a well-known social psychologist, asserted that human behaviors are driven by various tension systems with positive valences to intentionally attain certain goals or desirable solutions to living problems. The sources of energy in tension systems can be discovered in a person's genuine needs or quasi-needs. In other words, a need exists only when it upsets the inner equilibrium of mental states such that tension arises. Therefore, the field theory and its formula,  $B \text{ (behavior)} = f \text{ (Person [P], Environment [E])}$  developed by Kurt Lewin, becomes a well-accepted theory to understand the complicated and dynamic nature of human behaviors. Simply speaking, Kurt Lewin believes that human behavior is the product of a field of interdependent variables and an outcome of change in some state of a field during a given unit of time. Because field forces are originated by the valences of desired objects, which exist in the “life spaces” of a real world, the field theory is also formulated as the “ $B = (LS)$ ” to specify the mutual relationships between the natures of personal mentality and of the external world of social and physical environments (Fiedler, 2007; Gold & Douvan, 1997). According to the conceptual perspective of consumer behavior studies, gambling itself might be molded into a sellable commodity by capitalist enterprises whose marketing strategies are to provoke gamblers to consume out-of-the-ordinary-world leisure experiences, such as states of extreme tension or excitement, addiction, and stress-related disorders. Although each gambler would construct his/her own idiosyncratically subjective experiences based on how his/her consciousness interacts with the external environment and with internal past experiences, his/her experience of gambling is also affected by casino gambling arenas (Reith, 1999).

### **3. METHODOLOGY**

#### *3.1 The design of questionnaires*

The survey used in this study refers primarily to the “The Influences toward Macau after the Opening of Casino” questionnaire, which was designed by the Macau Youth Research Association and General Association of Chinese Students in Macau. The questionnaire of this survey consists three major parts. There are seven questions in the first part which designed to inquire the residents' attitude, cognition, and participation toward gambling. The second part of questionnaire survey totally has two “tick-all-that-apply” questions, in which three answers can be chosen from the question “What advantages do you think to work for the gambling-related job?” and “From which sources do you obtain about the job information of gaming-related industries?”. The third part of questionnaire survey is about the basic information of survey respondents including gender, age, educational background, marital status, years of residence, occupation, years for working in workplaces, and monthly income.

Although both Macau and Singapore governments currently regulate that only persons 21 years of age and above are eligible to enter the casino premises, the regulation in Macau was 18 years of age and above before October 2012. Therefore, in the initial design of this study, the target population of survey sampling was set to the Chinese residents in Macau and Singapore that were 19 years of age and above. After finishing the design of this research questionnaire, this research utilized the convenient sampling approach to collect 60 copies of the designed questionnaire from the research subjects (Macau and Singapore separately) as a pilot test in February, 2013, and the researchers then used an independent t-test to analyze the first part of the scales. The results of the independent t-test showed that all of the designed questions reached the levels of significance that were necessary for discrimination.

#### *3.2 The method of sampling and handing-out questionnaires*

This study employed the method of convenience sampling, but in consideration of the sampling fairness of information collections, the questionnaires were distributed to every administrative district. The formal questionnaires were handed out during March and April of 2013 in Macau and during May to June of 2013 in Singapore. According to Churchill's formula (Churchill & Surprenant, 1982), 480 surveys were distributed in Macau, and 450 copies were handed out in Singapore. After eliminating the inefficient responses, this research received a total of 416 useable responses from Macau and 409 useable responses from Singapore.

After analyzing these questionnaires, the study obtained Cronbach's coefficient alpha values of 0.938 for Macau and 0.898 for Singapore and KMO values of 0.858 for Macau and 0.832 for Singapore. This formal questionnaire had relatively high reliability and validity (Kaiser, 1974).

### *3.3 The approach of analyzing the collected data*

Hsu (2003) indicated that peoples from different countries (or regions) have differentiated viewpoints toward casino gaming. And gambling behaviors of peoples are influenced by various factors (Weinberger, Franco, Hoff, Pilver, Steinberg, Rugle, Wampler, Cavallo, Krishnan-Sarin, & Potenza, 2015). Thus, based on the research purposes, this study had the following research hypotheses:

Hypothesis 1: Residents from different regions will form different attitudes, cognitions, and participations toward gambling.

Hypothesis 2: Residents with dissimilar social backgrounds will express different attitudes, cognitions, and participations toward gambling.

Hypothesis 3: Residents' wills of going to a casino for gambling are influenced by the attitudes, cognitions, and behaviors toward gambling.

Hypothesis 4: The reasons of influencing residents to go to a casino for gambling include the residents' attitudes, cognitions, and behaviors toward gambling.

Thus, this research used descriptive statistics, an independent t-test, a one-way ANOVA, a correlation analysis, and a hierarchical regression in order to objectively examine the four hypotheses above.

## **4. RESEARCH RESULTS AND DISCUSSIONS**

### *4.1 The basic information of survey respondents*

First, to display the attitudes, cognitions, and behaviors of survey respondents from Macau and Singapore toward gambling (in Table 1), perceptual benefits of working for gaming-related jobs and the sources for getting job information in the gaming-related industry (in Table 2), and basic social backgrounds of survey respondents (in Table 3), the frequency distribution tables were utilized.

Of the aspect of cognitions, as shown in Table 1, nearly 20% of the surveyed subjects recognized that the chance of winning in gambling is bigger than losing. Obviously, most of the survey respondents realized that it is a difficult to get rich by winning from gambling activities. In fact, people who have long-term addicted in gambling usually suffer monetary loss, or even financial difficulty (Mathews & Volberg, 2013). In regard to the subjects' understanding of the nature of jobs in casino, 37.5% of the respondents from Macau who answered "Yes" are more than 28.9% of respondents from Singapore. This result should be related to the longer history of establishing

casinos gambling in Macau, so that its residents have more extensively and deeply contacted with the knowledge of gaming industries. Of the perspective of attitudes, the residents in surveyed areas showed very positive preferences of working in gaming industries; there are around 60% of respondents within both areas answered the choice “Yes.” In regard to the subjects' attitudes toward gambling, 5.5% of the subjects from Macau and 7.1% of the subjects from Singapore chose “Welcome,” whereas 28.9% and 38.6% of the subjects, respectively, chose “Not a big deal,” 22.6% and 20.5% of the subjects, respectively, chose “Unwelcome,” and 5.3% and 3.2% of the subjects, respectively, chose “Disgust”. About the dimension of behaviors, the percentages of the survey respondents from Macau (28.4%) who have worked in gaming-related industries were higher than the ones from Singapore (21.5%). In addition, over 80% of respondents expressed that there are acquaintances around who have participated in gambling activities. Otherwise, there are over 60% of the respondents who have ever gambled in a casino by themselves.

**Table 1 The attitudes, beliefs, and behaviors of survey respondents regarding gambling**

Items	Choices	Macao		Singapore	
		Persons	Percent	Persons	Percent
Gambling is winning more than losing	Yes	84	20.2	94	23.0
	No	332	79.8	315	77.0
Do you understand the nature of casino jobs?	Yes	156	37.5	118	28.9
	No	260	62.5	291	71.1
Are you willing to work in a casino?	Yes	243	58.4	253	61.9
	No	173	41.6	156	38.1
Opinions toward gambling behaviors	Welcome	23	5.5	29	7.1
	Acceptable	120	28.9	158	38.6
	Not a big deal	157	37.7	125	30.6
	Unwelcome	94	22.6	84	20.5

	Disgust	22	5.3	13	3.2
An acquaintance of yours gambles?	Yes, a lot of	112	26.9	107	26.2
	Yes, but only few	243	58.4	239	58.4
	None	61	14.7	63	15.4
Do you have any work experience in a casino?	Yes	118	28.4	88	21.5
	No	298	71.6	321	78.5
Have you gone to a casino to gamble?	Frequent	51	12.3	60	14.7
	Occasional	223	53.6	203	49.6
	Never	142	34.1	146	35.7

Furthermore, by statistically examining the survey respondents who have gone to casinos for gambling, this research obtained the following results of their attitudes toward gambling: 16.4% of the respondents from Macau and 15.3% of respondents from Singapore chose the item “Using small bets to win big rewards”; 33.6% of the respondents from Macau and 37.1% of the respondents from Singapore recognized gambling as a leisure activity. As Tao *et al.* (2011) indicated, in order to alleviate the boredom and stress of everyday routine obligations, some of the Chinese residents in Macau go to casinos for seeking sensational excitement and leisure opportunities through participating in gambling activities. Similarly, the positive association between gambling behaviors and leisure activities can be found in this study. Otherwise, 20.1% of the respondents from Macau and 16.1% of the respondents from Singapore thought that gambling is a way to relax; there were 27.0% of the respondents from Macau and 30.7% of the respondents from Singapore who chose the item “No particular opinion” toward gambling; and 2.9% of the respondents from Macau and 0.8% of the respondents from Singapore picked up the choice “Others.” In regard of the frequency of participation, there were 5.8% of the respondents from Macau and 2.0% of the respondents from Singapore who went to casino for gambling “Almost every day”; 6.6% of the subjects from Macau and 14.9% of the subjects from Singapore indicated that they “Once a week”; whereas 14.2% of the subjects from Macau and 19.8% of the subjects from Singapore noted that they went to the casino for gambling “Once a month”; 36.5% of the subjects from Macau and 37.1% of the subjects from Singapore chose “Once a three to six months,” whereas 36.9% and 26.2% of the subjects, respectively, chose “Once a year”.



Regarding the question “Have you been to a casino for gambling because of friends' invitations?”, 69.0% of the respondents from Macau and 63.3% of the respondents from Singapore answered “Yes,” and 31.0% (Macau) and 36.7% (Singapore) of the subjects said “No”.

Based on the investigation conducted by Smith and Hinch (1996), Canada's casinos are not major selling points that attract tourists because the majority of casino visitors are local residents. By using telephone calls to interview 1,121 surveyed subjects in Macau, Fong and Ozorio (2005) found that there were two third of the respondents who had participated at least one of the fourteenth forms of gambling in the chosen item “within the past year” (the result of this research showed similar percentages of the respondents for gambling within the past year). Otherwise, some studies found that casino operations could probably cause a radical increase in the local gambling population (Grinols, 1995) and may even trigger an upsurge in bankruptcy rates (Nichols, Stitt, & Giacomassi, 2000). Fong and Ozorio (2005) showed that 1.78% of the respondents from Macau are labelled as probable pathological gamblers and 2.5% of the surveyed subjects are classified as probable problem gamblers. Therefore, the respondents who almost frequented a casino held 5.8% (from Macau) and 2.0% (from Singapore) respectively, and were probably related to the category of problem gamblers. Otherwise, Braams, Peters, Peper, Güroğlu, & Crone (2014) indicated that gambling behaviors were probably strongly related to the social context in which they occur, so the “friends' invitations” may influence the gambling behavior or not, need a further discussion.

**Table 2. Respondents' opinions regarding the benefits of working in gambling-related jobs and the sources of job information in gaming industries**

Items	Choices	Macao		Singapore	
		Persons	Percent	Persons	Percent
The benefits of working in gambling-related jobs	Income	361	86.8	332	81.2
	Welfare	346	83.2	354	86.6
	Working environment	176	42.3	185	45.2
	Specified skills	125	30.0	159	38.9
	Opportunities for promotion	198	47.6	151	36.9
Sources of job information in gaming	Relatives	207	49.8	199	48.7
	Friends	346	83.2	365	89.2



industries					
	Classmates	147	35.3	93	22.7
	Family members	63	15.1	51	12.5
	Teachers	39	9.4	33	8.1
	Mass media	248	59.6	282	68.9
	Internet	174	41.8	185	45.2
	Others	19	4.6	12	2.9

As shown in Table 2, over 80% of the respondents respectively from Macau and Singapore considered that “Incomes” and “Welfares” are the most determinant benefits of working for gambling-related jobs. As Wan (2012) indicated, the establishments of casino could induce the investments of foreign capital and also benefit for the increase of job opportunities and for the diversification of job types. However, many researchers recognized that the founding of casino gambling is easily shown to “strangle” the developmental spaces of other industries (Wan & Kong, 2008), and even causes the development of materialism (Wan, 2012; Wu & Chen, 2015). Of the sources from which the respondents get job information for working in gaming industries, the major sources were from “Friends” and “Relatives”. Whereas, the chosen items of “Family members” and “Teachers” stood as the least sources for the respondents to get job information. Vong (2010) indicated that, obviously founded upon the principle of social morality, family members and school teachers usually do not encourage children and students to participate in any gambling activity. Therefore, it is understandable that family members and teachers seldom provide gambling-related information.

**Table 3 Attributes of respondents' backgrounds**

Items	Choices	Macao		Singapore	
		Persons	Percent	Persons	Percent
Gender	Male	225	54.1	224	54.8
	Female	191	45.9	185	45.2
Age	19-24 years old	87	20.9	73	17.9
	25-35 years old	201	48.3	252	61.6
	36-49 years old	63	15.2	68	16.6

	Over 50 years old	65	15.6	16	3.9
Educational background	Senior high school or under	196	47.1	141	34.5
	College	99	23.8	173	42.3
	Bachelor's Degree	115	27.6	89	21.7
	Master's Degree or above	6	1.5	6	1.5
Marital status	Single	212	51.0	247	60.4
	Married	119	28.6	110	26.9
	Married with children	85	20.4	52	12.7
Duration of residence	Less than 1 year	7	1.7	10	2.4
	1-3 year(s)	38	9.1	73	17.9
	3-6 years	39	9.4	74	18.1
	6-10 years	63	15.1	87	21.3
	More than 10 years	269	64.7	165	40.3
Occupation	Student	43	10.3	46	11.3
	Professional	34	8.2	31	7.6
	Public official	60	14.4	68	16.6
	Manufacturing	72	17.3	86	21.0
	Service industry	91	21.9	101	24.7
	Gaming-related industry	85	20.4	50	12.2
	Other	31	7.5	27	6.6
Years of work experience	No experience	44	10.6	36	8.8
	Less than 1 year	32	7.7	35	8.6
	1-3 years	86	20.7	81	19.8
	3-8 years	102	24.5	122	29.8
	More than 8 years	152	36.5	135	33.0

	7,000/1,400 less	94	22.6	102	24.9
Monthly income	7,000-15,000/1,400-2,500	180	43.3	237	58.0
(MOP\$/S\$)	15,000-30,000/2,500-4,000	129	31.0	66	16.1
	30,000/4,000 more	13	3.1	4	1.0

As shown in Table 3, 54.1% of the survey respondents from Macau and 54.8% of the respondents from Singapore are male, and female subjects comprise 45.9% (Macau) and 45.2% (Singapore) of the respondents. The majority of the respondents are centrally distributed around the age range of 25 to 35 years. The analysis of the respondents' educational backgrounds showed that 47.1% of the respondents from Macau and 34.5% of the respondents from Singapore reached the level of “Senior high school or under”; 23.8% and 42.3% of the subjects, respectively, reached the level of “College”; 27.6% and 21.7% of the subjects, respectively, achieved the level of “Bachelor”; and 1.5% and 1.5% of the respondents, respectively, completed the level of “Master or above”. Regarding marital status, the majority of the survey respondents stated a marital status of “Single”. In the section on occupations, the “Service industry” was found to be the leading occupation of the survey respondents. The analysis of the years of respondents' working experience revealed that over 50% of the respondents have working experiences more than three years. Finally, the analysis of the “Monthly income” variable showed that the respondents with a monthly income of MOP\$7,000-15,000 (approximately USD\$860-1,840) form the largest group of representatives from Macau (43.3%), whereas the respondents who earn SGD\$1,400-2,500 (approximately USD\$1,120-2,000) monthly make up the largest group of representatives from Singapore (58.0%).

For local residents, the developments of casino gambling can obviously produce positive benefits on the local economy, particularly increases in employment opportunities and in the levels of job payrolls. As indicated in their studies, Leung (2010) found that the majority of residents in Macau believe that casino gambling has improved their regional economies and increased the opportunities for employment. As shown in Table 3, the gaming industry influenced the residents in Macau and Singapore: more than 20% (in Macau) and 10% (in Singapore) of the survey respondents work in a gaming-related business.

#### 4.2 The analysis of differences of residents' attitudes, cognitions, and behaviors toward gambling

Because the majority of the population in both Macau and Singapore is Chinese (95% of Macau's resident population and 74% of Singapore's resident population), the survey respondents in this study should share similar values, attitudes, and behavioral propensity toward the

activities of “gambling”. As Fong & Ozorio (2005) revealed, the Chinese societies are undoubtedly regarded of sharing socially-collective cultures within which family and in-group members feel moralized obligations and responsibilities to support and help one another while one of members encounters a serious financial difficulty. Therefore, this study primarily used an independent t-test to analyze the probable differences of residents' attitudes, cognitions, and behaviors toward gambling. The outcome of this analysis is displayed in Tables 4.

**Table 4. Differences in residents' attitudes toward, beliefs of, and behaviors regarding gambling**

Items	t-value
Gambling is winning more than losing.	1.010
Do you understand the nature of casino jobs?	-2.647**
Are you willing to work in a casino?	1.010
Opinions toward gambling behaviors	1.010
Does an acquaintance of yours gamble?	-.340
Do you have any work experience in a casino?	-2.279*
Have you gone to a casino to gamble?	.184

Table 4 shows that, from the attitudes, cognitions, and behaviors toward gambling of Macau and Singaporean residents, only the two items appear to be significantly different. Clearly, because of having the longer developments of casino gambling in Macau, its residents possess more knowledge for the natures of casino jobs and more working experiences in casino businesses than Singaporean residents do. According to their study of gambling motives, attitudes, and behaviors for Chinese gamblers from Macau, Tao *et al.* (2011) found that the self-concept and self-realization, which were collectively labeled as self-worth in order to achieve the sense of expertise, to earn others' recognitions, and to learn more specialized knowledge and skills for working in a casino, are two significant factors of motivating people to visit casinos for gambling or gambling practices. However, the Table 4 also showed that the resident's attitudes, cognitions, and behaviors toward the activities of gambling from Macau and Singapore appeared,

in certain degrees, no significant differences. Therefore, in a nutshell, hypothesis one of this study is partially supported.

*4.3 The analysis of differences among various attributes of residents' backgrounds for the attitudes, cognitions, and behaviors toward gambling*

The second purpose of this study was to explore whether the differences in the residents' attitudes, cognitions, and behaviors toward gambling is due to differences in their social backgrounds. Thus, this study used the items categorized in the Table 1 to represent residents' attitudes, cognitions, and behaviors toward the activities of gambling and utilized the items listed in Table 3 to determine the social background of each resident. To analyze the relationships between the examined variables, this study used an independent t-test for the analysis of the variable "Gender" and one-way ANOVA for the analysis of the other items. The outcomes of these analyses are displayed in Tables 5 and 6.

**Table 5 Differences among various attributes of Macau residents' backgrounds in terms of their attitudes toward, beliefs of, and behaviors regarding gambling**

	Gender	Age	Education	Marital Status	Years of Residence	Occupation	Monthly Income	Years of Work
	t-value	F-value	F-value	F-value	F-value	F-value	F-value	F-value
A	1.285	1.070	5.104**	3.674*	2.574*	1.396	2.068	2.608*
B	-1.555	.091	.976	1.460	1.656	.998	3.154*	3.465*
C	1.285	1.070	2.441	3.674*	1.874	5.131**	3.974**	2.608*
D	1.285	1.071	5.104**	3.674*	2.574*	5.131**	2.068	2.608*
E	-3.517**	3.772*	.932	3.198*	1.594	1.987	.949	.807
F	-.257	1.888	.472	.959	.675	2.636*	.808	2.901*
G	-4.308**	10.794**	8.253**	11.332**	1.168	4.710**	3.270*	4.273**

Ps.: A – Gambling is winning more than losing

B – Do you understand the nature of casino jobs?

C – Are you willing to work in a casino?

D – What is your opinion of gambling behaviors?

E – Does an acquaintance of yours gamble?

F – Do you have any work experience in a casino?

G—Have you gone to a casino to gamble?

\*—  $p < .05$  ; \*\*—  $p < .01$

**Table 6. Differences among various attributes of Singapore residents' backgrounds in terms of their attitudes toward, beliefs of, and behaviors regarding gambling**

	Gender	Age	Education	Marital Status	Years of Residence	Occupation	Monthly Income	Years of Work
	t-value	F-value	F-value	F-value	F-value	F-value	F-value	F-value
A	.115	6.162**	1.714	.300	4.293**	.929	11.404**	.236
B	.355	1.672	1.359	1.359	.662	1.227	1.310	.389
C	.115	6.162**	1.980	2.958	7.243**	7.541**	13.144**	6.635**
D	.115	6.162**	1.714	2.958	4.293**	7.541**	11.404**	6.635**
E	1.581	.186	1.027	2.128	1.868	2.018	.182	.937
F	.528	.042	1.341	2.524	.338	1.061	.791	.707
G	-4.353**	13.596**	6.777**	16.977**	.759	7.911**	3.908**	8.054**

Note: The meanings of codes are as same as the ones in Table 5

As shown in the Table 5 and Table 6, the various residents' attributes from Macau and Singapore respectively induced differentiated attitudes, cognitions, and behaviors toward gambling. Although the majority of residents from these two investigated areas are Chinese, it is no doubt that, the social structures, cultural traditions, and lifestyles still displayed the differentiations. In fact, Loo, Raylu, & Oei (2008) indicated that “Social gambling is widespread among Chinese communities”, and “Cultural differences exist in patterns of gambling”, so, it is reasonable to see the results not completely similar. However, in regard to the item “Have you gone to a casino for gambling” (the real actualization of personal behaviors), the surveyed results from Macau and Singapore are analogous. In other words, the following various attributes “Gender”, “Age”, “Education”, “Marital status”, “Occupation”, “Monthly income”, and “Years of working experience”, with the exception of “Years of residence”, showed significantly differences toward the participation of gambling behaviors.

While gambling is, by definition, regarded as a pastime to engage in by choice, men usually choose highly risky games of gambling in order to satisfy their seeking of sensational stimuli and excitements (Wolfgang, 1988), and women frequently choose low stakes of gambling for socially connecting with family members and friends (Hing, Breen, & Gordon, 2012). Certainly, the social attribute of gender toward gambling activities in this study also showed similarly significant differentiations, comparing to the results of other researches as mentioned before. If combining the following attributes of residents' social backgrounds: "Gender" and "Marital Status," married women would recognize that gambling activities in commercial casinos for them are the alternative and pleasant approach to escape from depressed feelings of boredom and the socially gendered self in everyday lives, and also to gain time and experiences out from family responsibilities. In other words, gambling is a significant means for married women to resist traditional gendered roles of caregivers and house-keepers (Hing & Breen, 2001). According to the analytic results in Table 5 and Table 6 and related interpretations demonstrated above, the hypothesis two of this study is partially supported.

*4.4 The discussion of the residents' viewpoints on the correlations among their attitudes, cognitions, and behaviors toward gambling*

In order to explore the residents' attitudes, cognitions, and behaviors toward gambling from Macau and Singapore, this study used a correlation analysis to examine related statistical data. The examined results which are listed in Table 7 and Table 8 indicated that the correlations of residents' attitudes, cognitions, and behaviors toward gambling from Macau revealed extremely correlated, instead of ambiguous correlations of residents' attitudes, cognitions, and behaviors toward gambling from Singapore.

**Table 7 The analysis of the correlation among Macau residents' attitudes toward, beliefs of, and behaviors regarding gambling**

Item	A	B	C	D	E	F	G
A	1.000						
B	.006	1.000					
C	.060	.190**	1.000				
D	.203**	.226**	.450**	1.000			



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E	.085	.297**	.146**	.316**	1.000		
F	-.024	.548**	.250**	.115*	.255**	1.000	
G	.017	.130**	.177**	.340**	.331**	.205**	1.000

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Note: The meanings of codes are as same as the ones in Table 5

**Table 8 The analysis of correlation among Singapore residents' attitudes toward, beliefs of, and behaviors regarding gambling**

Item	A	B	C	D	E	F	G
A	1.000						
B	.024	1.000					
C	.082	-.044	1.000				
D	.046	-.043	.356**	1.000			
E	.115*	.287**	.003	.058	1.000		
F	.152**	.560**	.007	-.028	.249**	1.000	
G	.000	-.087	.076	.322**	.044	-.104*	1.000

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Note: The meanings of codes are as same as the ones in Table 5

From the perspective of Kurt Lewin's “field theory” and “tension system”, human behaviors are clearly driven by the complicated but dynamically interactive variables of personal attributes and social/physical environments. Thus, the objects or events in the life space play important roles of being attractive/seductive “valences” of field forces. Therefore, it is crucial to pay more attentions on the powerful influences of operational/marketing strategies of commercial casinos on gamblers' motives, attitudes, cognitions, and behaviors. As Gottdiener (1997) indicated, similarly to many public buildings, a casino is an environment that is socially and commercially constructed to serve as a place for human beings to involve in dynamic social interactions. On

the one hand, in its long historical process of gambling-related industries, the operational and managerial strategies of casino gambling in Macau have evolved into many particular systems (such as various loyalty programs for casino members and the traditional VIP casino system) and of customer management (Zeng & Prentice, 2014), which have been characterized as the crystallization of Macau gambling culture and of socially interactive environments. On the other hand, the collective belief system in Macau society plays an extremely significant factor that influences residents' involvement in gambling activities. As Li, Masuda, & Russel (2015) indicated, behavioral decision-making is definitely influenced by cultural thinking styles, so that collectively cultural belief systems in Macau play a crucial role for residents' behavioral involvement in gambling activities.

According to the phenomenological analysis of casino gambling culture in Macau above, it is not difficult to assume that residents' attitudes toward, beliefs of, and behaviors regarding gambling are fiercely influenced by the extensive and exclusive “valences” of social and physical environments that have been constructed by the producers of entertainment facilities, the operators and regulators of the gambling industry, and related official government organizations. That is why Macau residents revealed extremely correlated attitudes toward beliefs of, and behaviors regarding gambling as opposed to the ambiguously correlated attitudes of residents in Singapore. However, the correlated relations of the residents' attitudes toward, beliefs of, and behaviors regarding gambling have been suggested by many researchers (Chan, 2010). When the correlated relationships of motives, attitudes, and behaviors regarding gambling of non-casino gamblers and casino gamblers are compared in Macau, Tao *et al.* (2011) concluded that casino gamblers displayed stronger motives for monetary gain and sensation seeking, weaker self-control, and heavier involvement with gambling. Therefore, Hypothesis three of this study is solidly supported.

#### *4.5 The discussion of influential factors causing residents to participating in gambling activities*

This study utilized the analytical approach of hierarchical regression, by setting the variable “Have you gone to a casino for gambling” as the dependent variable, other items in Table 1 as the independent variables, and social attributes of residents' background as the control variables, to examine the influential factors. The statistical result of using an analytical approach of hierarchical regression is listed in Table 9 and Table 10. Before interpreting the statistical result in Table 9 and Table 10, it is primarily necessary to discuss the issue of collinearity. The tolerance of each variable in Table 9 and Table 10, after through the analytical process, is between 0.559 and 0.989, and the variance inflation factor (VIF) is smaller than 2. Therefore, the issue of collinearity took place (Hair, Black, Babin, Anderson, & Tatham, 2005).

**Table 9 The analysis of variables influencing residents' participation in gambling (Macau)**

The order of input variable	R	R <sup>2</sup>	ΔR <sup>2</sup>	F-value	ΔF	B	β
Constant						1.062	
1. What is your opinion of gambling behavior?	.369	.136	.136	66.243**	65.243**	.173	.260
2. Does an acquaintance of yours gamble?	.441	.195	.059	49.930**	30.041**	.195	.192
3. Do you have any work experience in a casino?	.453	.205	.010	35.432**	5.376*	.170	.119
4. Marital status	.487	.237	.032	31.966**	17.350**	-.147	-.180
5. Gender	.503	.253	.016	27.794**	8.710**	.166	.128

Note. Dependent variable: Have you gone to a casino to gamble?

\*— p< .05 ; \*\*— p< .01

**Table 10 The analysis of variables influencing residents' participation in gambling (Singapore)**

The order of input variable	R	R <sup>2</sup>	ΔR <sup>2</sup>	F-value	ΔF	B	β
Constant						1.944	
1. What is your opinion of gambling behaviors?	.344	.118	.118	54.706**	54.706**	.209	.298
2. Do you have any work experience in a casino?	.358	.128	.101	29.904**	4.617*	-.128	-.077
3. Marital status	.414	.171	.043	27.914**	20.988**	-.161	-.169
4. Years of work experience	.433	.187	.016	23.267**	7.907**	-.121	-.224
5. Monthly Income	.455	.207	.020	21.021**	9.970**	.196	.193

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6. Gender	.469	.220	.013	18.896**	6.767*	.163	.120
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Note. Dependent variable: Have you gone to a casino to gamble?

\*—  $p < .05$  ; \*\*—  $p < .01$

According to the outcomes of Table 9 and Table 10, the most crucial factor of influencing residents to participate in gambling behaviors is the perspective “What is your opinion to gambling behaviors?” In regard to the influential force of moral judgment toward gambling behaviors, Ndubisi, Nataraajan, & Chew (2014) provided similar suggestion. Besides, Fong & Ozorio (2005) indicated that social gambling is regarded by most Macau residents as a form of entertainment and a social activity for friends or relatives to engage in social gatherings, and that is why social gambling is ranked first in terms of popularity. Therefore, for Macau residents, the variables “Does any acquaintance of yours participate in gambling?” and “Do you have any working experience of casino gambling?” were selected to represent crucial factors influencing their decisions to go to casino for participating in gambling activities, are not so surprised. Whereas, it is interesting that the variable “Do you have any working experience of casino gambling?” is chosen by Singaporean residents to form the negative correlation. Maybe this kind of interests is driven by “curiosity.”

“Marital status” and “Gender” were chosen as the crucial influential factors by Macau and Singapore residents respectively. In other words, people with the single status and females are less willing to go to a casino for participating in gambling activities. In addition, in the Table 10 (of Singapore), the two variables “Years of working experiences” and “Monthly income”, which could be regarded as economic conditions, were picked to be two influential factors. These choices indicate that the Singaporeans residents may be more practical than Macau residents. According to the study conducted by Fong & Ozorio (2005), gambling in casinos was more popular in Macau for men than for women and for the married than for the singles, though there were no significant differences in participation rates among various income levels. Therefore, the result of influential factors from the perspective of Macau residents in this study is similar to Fong & Ozorio's study (2005). Thus, the hypothesis four of this study is partially supported and the results of this study are also worth for the related departments to take as a useful reference.

## 5. CONCLUSION

Following the evolving processes of social history, the attitudes, beliefs, and behaviors of humans toward gambling have continuously shifted into diverse cultural contexts. From the perspective of Kurt Lewin's field theory, socio-cultural and physical environments lead the persuasive influences of conditioning the behavioral proclivities of participation. Beginning in the 1930s, the developmental history of Macau's casino gambling is more than eighty years old

and has already earned Macau its famous title of “Monte Carlo of the Orient” (Vong, 2004). Therefore, the gambling industries in Macau have created many job opportunities for its residents, and have constructed powerful influences on residents' mentalities. Contrarily, for Singapore, the commercial casino is an emerging industry. Although the establishments of two integrated resort casinos have brought a large amount of economic revenues in a short time, it is too early to reach deep-rooted influences on residents' mentalities as the casino culture in Macau does. Therefore, it is understandable to find the partial differences of residents' attitude, cognition, and behaviors toward gambling from Macau and Singapore.

The majority of the population in both Macau and Singapore is Chinese, but there are still a lot of differences in social structures and lifestyles. And this study adopted the already-set questionnaire designed by other researchers, so that there may be somehow limitations on questions themselves. Thus, it is definitely not enough to explore residents' attitude, cognition, and behaviors toward gambling simply from the perspective of residents' social attributes. In fact, the operational and managerial mechanisms of commercial casinos in Singapore are more conservative than the ones in Macau. As Pereira (2007) suggested, Singapore government is a highly interventionist government, so that most entrepreneurial developments have to significantly rely on administrative policies. Otherwise, it is worthy to explore whether Chinese tourists who within recent years have massively visited Macau and Singapore casinos could cause the changes of residents' gambling attitudes, cognitions, and behaviors. Because this study only investigated the related issues synchronically, its results definitely have its limitations. Therefore, the researchers suggest that the further studies could utilize the planned behavior theory to investigate the influences of political, economic, social, and policy-making factors on residents' attitude, cognition, and behaviors toward gambling from Macau and Singapore. There would be more useful contributions if the further study could focus on series of temporal transformations of residents' gambling attitudes, cognitions, and behaviors.

Wong & Rosenbaum (2012) demonstrate that commercial casinos might satisfy visitors' desire for entertainment-for-socialization and of sightseeing-for-relaxation, which closely interlock travel and leisure experiences. Thus, from the perspective of local residents, the functional contributions of gambling in commercial casinos might be associated with the leisure style of entertainment-for-socialization and gaming-for-relaxation. In addition, in the study of the relationships between gambling motives and consumption experiences, Cotte (1997) concludes four general categories of why people go to casinos for gambling: economic, symbolic, hedonic, and experiential consumption motives. Although gambling is probably regarded as a marginal or shadowy social status within leisure activities by most leisure scholars, who prefer to investigate clean, healthy, legal, and morally uncontaminated forms of leisure (Lynch & Veal, 2006), it is important to notice that gambling is a casual, clean, and legal form of leisure for non-problem

gamblers. Therefore, as McMillen (1996) indicated, the understanding of gambling conducted by researchers has been contributed on policy-related decisions whose ranges include the further expansions of gambling facilities and the types of required regulation or legislation to employ.

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