

# Perception of Macao Teachers and Students Regarding Gaming Operators' Social Responsibility

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## Abstract

The study brings to the forefront a discussion of corporate social responsibility of gaming operators. It assessed Macao high school students' and teachers' perceptions of the extent of social responsibility being exercised by the six local gaming operators, as well as their support for the operators, and desire for further gaming investment and work opportunities in the gaming sector. The majority of the respondents were not aware of gaming operators exercising socially responsible activities. Among those who were, the majority perceived that only one company was involved and none has participated in protecting the environment, beautifying the city, creating a harmonious environment, treating local staff fairly, and promoting responsible gambling. Five social responsibility factors were identified. Poisson regression analysis indicated that perception of gaming operators' being considerate of Macao's interests was influenced significantly by their contribution to three socially responsible activities.

**Keywords:** gambling, gaming impact, resident attitude, social audit, social responsibility

## Gaming Development in Macao amid the "Financial Tsunami"

The recent boom in Macao's gaming sector has come to a slowdown with the outbreak of the "financial tsunami" (worldwide financial crisis caused by American sub-prime mortgage crisis in 2007) and restrictions on Mainland's Individual Visit Scheme to Macao since the second half of 2008. The Scheme was implemented in 2003 which allows mainland residents from designated cities to visit Hong Kong and Macao on an individual, as opposed to tour group, basis. The objective was to boost tourist arrival to the two cities during the Severe Acute Respiratory Syndrome (SARS) outbreak. Since then, mainland tourist arrival to Macao has set new records every year. The policy took a reverse turn in 2008 limiting the number of visas that can be obtained at a time, lengthening the lapse between visits, and restricting Hong Kong visa holders from making a side visit to Macao.

Nonetheless, the gaming revenues collected in the good days had been impressive (Table 1) and had helped Macao cushion some of the economic shock. The latest statistics from the Macao Gaming Inspection and Coordination Bureau (2009) indicated that Macao's gaming revenue had even reached a record high of MOP 109.8 billion (USD13.73 billion) in 2008, a 31% increase from 2007, although there is speculation that it would very soon slip for the first time in years. In 2007, the government rechanneled some of this tax revenue to the community through a "wealth sharing scheme" – giving a one-off MOP5,000 (USD625) allowance to permanent, and MOP3,000 (USD375) to non-permanent, residents. The same policy continued in 2008, with slight increments to MOP6,000 (USD750) to permanent, and MOP3,600 (USD450) to non-permanent, residents.

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**Table 1. Gross revenue from different gaming activities in 2003-2008 (in MOP\* million)**

ITEMS	2003	2004	2005	2006	2007	2008
Games of fortune (casino games)	28672	41378	46047	56623	83022	108772
Greyhound racing	74	84	67	67	98	186
Horse racing	1004	1566	636	437	403	501
Chinese lottery	3	5	7	7	6	6
Instant lottery	0.07	0.03	0.03	0.03	.02	.003
Sports lottery – football	510	442	333	327	273	304
Sports lottery - basketball	50	36	44	60	44	57
Total	30315	43511	47134	57521	83847	109826

Source: Macau Gaming Inspection and Coordination Bureau, 2009

\*USD1 approximately equals MOP8

Investments elsewhere have turned sour by the “financial tsunami”. The gaming operators not only suffered lower visitation, less gambling expenditure but also had to face call back on loans and large devaluation of properties and equity investments. Even before Macao statistics could confirm lower gambling revenues at the start of 2009, gaming operators had been quick to slash jobs and suspend investment before the year got started. Venetian has laid off 11,000 construction workers, reduced work and thereby wages of its 6,800 casino staff by 13.3% and suspended two projects on the Cotai Strip; Galaxy has laid off 270 casino staff, reduced work hours of 2,400 others translating into a pay cut of 13.3% and suspended its Cotai project; and Crown (operated by Melco) has launched an unpaid leave scheme, cutting 7% to 8% of salaries among its 3,600 employees. Although the companies announced that they would provide training to employees during their downtime and offer them better promotion opportunities when fortunes were reversed, many local residents and the Labour Union queried the legitimacy of these massive lay-offs while the wider community began to question the social responsibility of these huge corporations and whether there has been adequate societal and governmental audit in their exercise of such responsibility. A group of “concerned residents” were reported to have collected signatures to petition against Las Vegas Sands Corporation for allegedly having diverted profits earned in Macao to fund its Singapore project (“Residents protest against LV Sands for abandoning Macao” 2009) - an accusation which the company had denied. The current economic downturn serves as a cooling period for the community to debate fundamental issues which have been forgotten or brushed aside when businesses and jobs were abundant and when most people were too busy rejoicing over their new-found wealth.

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### **Corporate Social Responsibility**

Attention given to corporate social responsibility (CSR) has grown in the last few decades after a series of articles on this topic appeared in the Harvard Law Review in the 1930s (Cochran 2007). Applying this concept to the gaming industry attracts even more interest as the nature of the gaming business itself requires a lot of moral and social justification. The achievement of common good is perhaps the most important one, and which many would argue should be made a top priority business objective of any gaming provider to justify its very existence. In many parts of the world, it is the practice of companies engaged in ethically questionable industries such as gaming, tobacco, alcohol, manufacturing of

military items or nuclear power to respond to this social pressure through philanthropy, as a way of giving back to the community to achieve common good. Even so, Harris (2005) pointed out that such charitable activities might be tainted with morally marginal business intentions to promote false altruism and whitewash the image of the questionable business operations that might ultimately reinforce sales and consumption. She further questioned the nature of giving of gaming enterprises considering their predatory nature and the minuscule amount donated to community benefits. Financing research in the field is another way companies contribute to the common good. However, there is concern that research may then become biased when the resources come from a sponsor with a vested interest in the outcome. Corporate philanthropy becomes “business decisions” when the philanthropic activities also enhance the corporation’s profitability. This concept was elaborated by Porter and Kramer (2002) when they noted a new type of corporate philanthropy, pointing out that “social and economic goals are not inherently conflicting but integrally connected” (p.5).

Johnson (2001) argued that if companies were to be held responsible for their societal and environmental impact, a social audit similar to a financial audit would be necessary. He explained that a social audit is a standard process for identifying, measuring and reporting the ethical, social and environmental impact of an organization. According to him, the Council on Economics Priorities is probably the best-known organization in the corporate social responsibility arena. It has been rating firms on 11 categories of social and environmental issues since 1975. These categories include environment, women’s advancement, minority advancement, charitable giving, community outreach, family benefits, social disclosure, work-place issues, military contracts, animal testing, and homosexual issues. Among the numerous ethical, social and environmental audits available, one that is similar to ISO9000 and ISO14000 is SA8000 (Social Accountability 8000), an audit carried out by an independent auditor who certifies that a firm is in compliance with the audit standards, which deal with issues including forced labour, unsafe working conditions, insufficient wages, use of physical punishment and abuse of overseas suppliers.

Henriques (2001) explained the concept of civil society as consisting of informal groupings, movements, voluntary organizations and NGOs that exist alongside the public and private sectors to form the society as a whole. He argued that as organizations grow over time, their connection to the civil society and to the concerns and issues faced by community members weakens and hence it is necessary to have social audits by the civil society to monitor organizations’ social and environmental performance over time, as they affect stakeholders such as retailers, employees, local community, shareholders, pressure groups and the environment. Social auditing can be understood as a process of engagement and collaboration with stakeholders. Walle (1995) posited that there were three categories of ethical orientation of organizations: social obligation – contending that the organization’s very aim is to pursue profitability and legality; social responsibility – suggesting that powerful and influential organizations should

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act in ethical and socially responsible ways, addressing current problems that may arise as a result of their operations; and social responsiveness - which, on the other end of the continuum, demands that enterprises anticipate future developments and address them in a forwarding-thinking and proactive way.

Gambling as an activity has always been the subject of controversy. Although casino companies have started to practice corporate social responsibility activities, they may still be blamed for providing unchecked gambling (Lee and Park 2009). The decision to legalize the activity in a destination is based on the belief that the economic gains will outweigh the social costs. The same rationale applies to business operations of other nature, according to Dodd’s (1932) argument, as modern large firms are permitted and encouraged by the law primarily because of the benefits and services they bring to the community

rather than the profits they generate for the owners. Hence, great expectations fall on the government and gaming operators to maximize economic gains for the community while mitigating the social costs. Black and Ramsay (2003) argued that a gambling business should be based on the principle of “providing gambling that does not aim to exploit people for whom gambling may create personal or financial problems” and that gambling businesses should pay a fair share of taxes and provide support for charitable purposes. Other measures that the gaming provider should observe to respect the freedom of all individuals is to support their capacities for control and choice by displaying as much information as the individual would need to make decision about their participation in gambling, ensuring that promotions and advertising campaigns do not mislead patrons towards unreasonable gambling, and ensuring that the communication is not deceptive or misleading.

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### **Objective of the Study**

The study aims to fill a void in current gaming studies about Macao as it brings to the forefront a discussion of corporate social responsibility of gaming operators. The study assesses certain groups of residents’ perceptions of the extent of social responsibility being exercised by the six local gaming operators. The results would be useful in helping the government, community, and gaming operators reflect on the current state of corporate social responsibility in Macao, particularly in the gaming sector, and debate on the need for some form of social audit of large corporations.

### **Methodology**

#### *Instrument*

A questionnaire survey was adopted in the study. The questionnaire consists of four parts. The first part screens respondents for their or their family members’ work relationship with the six gaming operators in Macao. The second part consists of 17 examples of socially responsible activities, as suggested in the literature review (Hing & McMillen 2002; Black & Ramsay 2003; Harris 2005; Cohran 2007; Lee & Park 2009). The third part asks about respondents’ support for the operators, their attitudes toward further gaming investment in Macao, and desire to work for these companies. The last part collects demographic data of the respondents.

#### *Sampling*

The target respondents were local high school graduating students and teachers during the academic year 2008/09. The reason for choosing these two cohorts was at the beginning of the gaming boom in Macao, there had been quite a number of reported cases of high school students, and even teachers, quitting school to work as casino dealers for quick money. There is concern about changes in values among teenagers and high school teachers as they become short-sighted when making study and career choices. High school students or the younger population has a vital function of rejuvenating a community and bringing to it new skill sets and knowledge to compete in the modern economy. High school teachers are entrusted with the mission to help them build a solid foundation for these skills and knowledge and, most importantly, mold their character and instill moral values deemed important for a community’s well-being and sustainability. Gauging how these two groups perceive gaming operators’ social responsibility will provide valuable insights into the social impact of gaming development. In addition, the results will provide useful information to the government and gaming operators in understanding what the younger generation and educators expect from gaming development and whether these expectations have been met. This will affect their support for further gaming expansion.

According to the statistics provided by the Macao Education Department (2009), there were 5,509 would-be high school leavers and 38 registered high schools in Macao in the academic year 2007/08. Invitations were sent to all high schools to attend a talk and a dinner gathering. Representatives from 28 high schools attended the event. Two evening high schools were excluded from the study as their target students are working adults. A total of 550 student-version and 270 teacher-version questionnaires were distributed to the school representatives according to the school size. The school representatives were given instructions to randomly select student and teacher respondents among all qualified candidates in their schools. Finally, 547 student questionnaires and 249 teacher questionnaires were returned.

**Results**

*Sample Characteristics*

Table 2 shows a profile of the sample. In both cohorts, there were slightly more females than males (56.7% in the student and 58.3% in the teacher cohort). All respondents in the student cohort were in the graduating class and were between 16 to 22 years old. The majority of the teacher respondents (56.9%) were between 25 to 34 years old, followed by 17.4% between 35 to 39 years old. Around 21% were over 40 years old. Slightly over 60% of the teacher respondents were married, among whom 43.8% had children. Almost all of them (98.7) had a monthly income of at least USD 1,250.

**Table 2. Sample Characteristics**

		Students N=547	Teachers N=249
Gender	Male	43.3	41.7
	Female	56.7	58.3
Education	Senior secondary graduating class	100.0	
	Completed high school		0.4
	Some college		4.6
	University or above		95.0
Age	16-22	100.0	
	18-24		4.6
	25-29		27.8
	30-34		29.1
	35-39		17.4
	40-44		6.6
	45-49		5.8
	50-54		5.0
Marital Status	Above 55		3.7
	Single	100.0	39.6
	Married no kid		16.7
Monthly Income	Married with kid		43.8
	Less than USD625	n.a.	0.4
	USD625.1 - 1250	n.a.	0.8
	USD1250.1 -1875	n.a.	33.4
	Above USD1875	n.a.	65.3

*Descriptive Statistics*

The students and teachers were asked to identify, among all six gaming operators, how many had contributed to the social responsibility items in question. Multiple response tables were generated for the student and teacher cohorts (Tables 3 and 4). Figures in each column indicate the percentage of votes given to the corresponding answer. For example, in the student cohort (Table 3), for the item “give scholarships to locals”, 73% of the student respondents did not know if any gaming operators had offered

scholarships to the locals; 10.06% of the respondents believed that none of the gaming operators had offered any scholarships; 13.59% believed that one operator had done so and 2.98% believed two had, and so on.

Table 3 indicates that for 12 out of 17 social responsibility items, the majority of student respondents who were aware of socially responsible activities carried out by the gaming operators answered that only one company, but not necessarily the same company, had been contributing to the item in question. It is worth noting that, nonetheless, there were over 10% of student respondents who believed that all six companies created business opportunities for local enterprises and offered training opportunities to local people. Looking at the “none” column, the majority of the student respondents claimed that no company participated in six out of 17 activities: protect the environment, treat local staff fairly, beautify the city, create a harmonious environment, promote responsible gambling, and conduct research on problem gambling.

**Table 3. Descriptive statistics on social responsibility items – Student cohort**

Students (N=547)	Don't know	None	One	Two	Three	Four	Five	Six
Give scholarships to locals	73.00	10.06	13.59	2.98	0.37	0.00	0.00	0.00
Promote responsible gambling	70.79	11.80	11.80	1.50	0.37	0.75	0.37	2.62
Conduct research on problem gambling	77.90	9.00	8.82	2.63	0.56	0.56	0.00	0.38
Finance organizations and activities dealing with problem gambling	80.61	7.41	8.37	1.52	0.57	0.38	0.00	1.14
Develop local talents	46.62	6.77	27.26	6.02	4.32	2.07	0.94	6.02
Enhance Macau's image	37.17	8.74	26.21	13.94	5.76	2.79	0.56	4.83
Contribute to charity	44.88	3.91	33.33	7.08	3.72	1.86	0.56	4.66
Introduce new technology	61.75	5.41	17.54	5.60	4.29	1.68	0.37	3.36
Create business opportunities for local enterprises	44.49	6.27	18.63	7.98	3.42	1.71	0.95	16.54
Protect the environment	65.05	24.67	6.54	2.43	0.37	0.56	0.00	0.37
Participate in beautifying the city	63.83	17.80	11.74	3.03	2.08	0.76	0.00	0.76
Offer good remuneration to locals	48.68	11.70	15.66	7.92	4.72	1.89	0.75	8.68
Offer good career development to locals	54.39	11.78	13.27	7.29	2.43	1.12	1.31	8.41
Offer training opportunities to locals	34.26	5.03	26.82	8.19	6.89	4.10	1.12	13.59
Treat local staff fairly	58.04	21.44	12.38	2.96	2.40	0.55	0.37	1.85
Create a harmonious working environment	66.48	13.78	11.92	3.54	2.23	0.93	0.00	1.12
Introduce best management practices	61.12	6.17	11.96	8.97	5.98	2.24	0.75	2.80

Table 4 indicates that for 12 out of 17 items, the majority of the teacher respondents who were aware of socially responsible activities carried out by the gaming operators answered that only one company, but not necessarily the same company, had been contributing to the item in question. It is worth noting that, nonetheless, there were over 10% of teacher respondents who believed that all six companies created business opportunities for local enterprises, offered good remuneration, career development and training opportunities to local people. Looking at the “none” column, the majority of the teacher respondents claimed that no company participated in six out of 17 activities: protect the environment, treat local staff fairly, beautify the city, promote responsible gambling, conduct research on problem gambling, and finance organizations and activities dealing with problem gambling.

*Both student and teacher response patterns were quite similar but more teachers thought that at least two, instead of only one, gaming companies had shared in the contribution to six socially responsible activities.*

*Perception of Macao Teachers and Students Regarding Gaming Operators' Social Responsibility*

It is observed that both student and teacher response patterns were quite similar but more teachers thought that at least two, instead of only one, gaming companies had shared in the contribution to six socially responsible activities.

**Table 4. Descriptive statistics on social responsibility items – Teacher cohort**

Teachers (N=249)	Don't know	None	One	Two	Three	Four	Five	Six
Give scholarships to locals	81.56	4.10	10.66	2.46	0.82	0.41	0.00	0.00
Promote responsible gambling	78.10	10.74	8.26	2.48	0.00	0.00	0.00	0.41
Conduct research on problem gambling	88.40	5.40	5.39	0.83	0.00	0.00	0.00	0.00
Finance organizations and activities dealing with problem gambling	87.82	6.72	5.04	0.42	0.00	0.00	0.00	0.00
Develop local talents	50.83	5.42	22.08	7.92	7.08	1.25	0.83	4.58
Enhance Macau's image	48.76	7.58	17.77	11.16	6.61	2.89	0.41	4.55
Contribute to charity	45.23	2.07	22.41	13.28	6.64	3.32	1.66	5.39
Introduce new technology	72.50	2.50	8.75	7.08	4.17	1.67	0.00	3.33
Create business opportunities for local enterprises	49.16	4.20	14.71	9.24	2.94	0.00	1.26	18.49
Protect the environment	67.92	21.67	7.08	1.67	1.25	0.00	0.00	0.42
Participate in beautifying the city	61.41	14.11	10.37	4.56	7.05	0.83	0.00	1.66
Offer good remuneration to locals	51.88	6.69	11.72	10.46	3.35	0.42	1.26	14.23
Offer good career development to locals	54.39	8.79	10.88	10.88	0.84	0.84	1.26	12.13
Offer training opportunities to locals	46.25	1.25	17.50	10.42	4.58	2.08	2.50	15.42
Treat local staff fairly	68.33	14.17	12.50	1.25	2.08	0.83	0.00	0.83
Create a harmonious working environment	77.08	6.67	9.58	2.92	1.25	0.00	0.00	2.50
Introduce best management practices	64.44	3.35	10.46	11.30	2.93	3.77	0.42	3.35

The respondents were asked if there was enough community and governmental audit on the exercise of social responsibility by gaming operators. Around 66% and 78% of student and teacher respondents felt there was inadequate audit, respectively. Only 8.4% and 1.7% of students and teachers felt opposite and the rest of the respondents had no idea.

*Factor Analysis*

A factor analysis was performed on the whole sample to examine the underlying factors of the 17-item social responsible activities bank. The scale of the items ran from 0 – no gaming companies contributed to this item, to 6 – all six had contributed to this item. “Don't know” and “no companies contributed (0)” responses were combined into one category - “Unaware”. This is because perception of the existence or non-existence of a condition or phenomenon is not necessarily based on actual knowledge. According to the MSN Encarta dictionary, perception is an impression, an attitude or understanding based on what is observed or thought. In addition, the author has no means to verify whether the “no companies contributed” responses were based on actual and accurate fact to the knowledge of the respondents. Hence, there is justification to believe that those respondents who did not know about any contribution and those who thought there was no company contributing to socially responsible activities reflected that they were both “unaware” of such activities.

Principal components analysis with varimax rotation was used. The sample size used in the analysis was 657 as cases with missing values were excluded listwise. KMO was 0.82 and significant, indicating sample adequacy for the analysis. Five factors with a total explained variance of 56.52% were extracted and all factors had an eigenvalue larger than 1 (Table 5).

The five factors were labeled: Factor 1 – Business and Employment (4 items); Factor 2 – Community Development (5 items); Factor 3 – Responsible Gambling (3 items); Factor 4 – Management Practices (3 items); Factor 5 – Environmental Protection (2 items). The item “offer training opportunities to locals” loaded onto both Factors 1 and 2 with the same weight coefficient of 0.47. After considering the theoretical significance of the item in relation to the two factors, it was decided to include the item in Factor 1. The scores of all items belonging to each factor were averaged into indices for subsequent analysis.

**Table 5. Principal components of social responsible activities (N=657)**

	Business and Employment	Community Development	Responsible Gambling	Management Practices	Environmental Protection
Create business opportunities for					
local enterprises	0.68				
Offer good remuneration to locals	0.73				
Offer good career development to locals	0.78				
Offer training opportunities to locals	0.47				
Give scholarships to locals		0.59			
Develop local talents		0.62			
Enhance Macau’s image		0.50			
Contribute to charity		0.64			
Introduce new technology		0.46			
Promote responsible gambling			0.70		
Conduct research on problem gambling			0.75		
Finance organizations and activities dealing with problem gambling			0.82		
Treat local staff fairly				0.68	
Create a harmonious working environment				0.73	
Introduce best management practices				0.59	
Protect the environment					0.78
Participate in beautifying the city					0.86
Eigenvalues	4.421	1.702	1.243	1.182	1.061
Variance explained	26	10.02	7.31	6.95	6.24
Reliability	0.7	0.64	0.68	0.56	0.66
KMO	0.82	(sig. at 0.000)			

*Analysis of Group Differences*

***Personal Interest in Gaming Development***

Before further analysis, it is necessary to assess whether the respondents’ perception of gaming operators’ exercise of social responsibility was affected by respondents’ personal benefits or interests gained from gaming development. All respondents were asked if they or their family members had any previous or current employment relationship with the six gaming operators. Both cohorts contained respondents who answered to this characteristic. In the student sample, 44.4% of the student cohort and 31.7% of the teacher cohort had personal or familial employment relationship with the gaming operators.

For each cohort, an independent t-test was conducted with the five social responsibility factors. The results showed that for all five factors, there were no significant differences, in either cohort, between the group that had employment relationship with the gaming operators and the group that had not. The following analyses then proceeded with the whole sample, divided into student and teacher cohort where necessary.

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**Teacher versus Student Perceptions**

Independent t-test results showed that students and teachers only differed on one social responsibility factor - Responsible Gambling (Table 6). Recall earlier that the scale for the social responsibility items ran from 0 – no gaming companies contributed to this item, to 6 – all six had contributed to this item. Both student (m=0.28) and teacher means (m=0.10) were low, indicating the majority of both cohorts was inclined to perceive that no company was promoting responsible gambling.

**Table 6. Independent t-test on social responsibility factors for students and teachers**

	Student (N=547)		Teacher (N=249)		t	Sig.
	Mean	SD	Mean	SD		
Business and Employment	1.33	1.44	1.47	1.63	-1.14	0.26
Community Development	0.81	0.86	0.80	0.92	0.10	0.92
Responsible Gambling	0.28	0.74	0.10	0.27	5.10	0.00
Management Practices	0.52	0.84	0.47	0.86	0.67	0.50
Environmental Protection	0.25	0.68	0.36	0.78	-1.88	0.06

*Regression Analysis: Consideration of Macao's Interests and Benefits for Macao*

Descriptive statistics in Table 7 showed several statements gauging both cohorts' perception of gaming operators' consideration of Macao's interests and contribution to its benefits, as well as overall support for the gaming operators and desire for further investment and employment opportunities in gaming. It was observed that among the respondents who were aware of the issues in discussion, the majority of both cohorts (20.9% of students; 19.25% of teachers) thought that no gaming operator had considered Macao's interests. Most respondents (31.09% of students; 38.24% of teachers) did not support any company. Most students (23.21%) hoped that one gaming operator could invest more in Macao but most teachers (22.13%) did not wish for any further gaming investment. The majority of both students (34.08%) and teachers (63.60%) expressed they did not wish to work for any gaming company, but more strongly so for teachers. Nonetheless, the majority of both cohorts (16.26% of students; 11.11% of teachers) admitted that all six gaming operators had brought benefits to Macao.

**Table 7. Overall support, future gaming investment, and employment desirability (Students' N=549; Teachers' N=247)**

		Don't know	None	One	Two	Three	Four	Five	Six
Students	Consider Macao's interests	56.16	<u>20.90</u>	14.93	3.92	1.68	0.56	0.37	1.49
Teachers		63.60	<u>19.25</u>	12.13	2.93	0.84	0.42	0.00	0.84
Students	Bring benefits to Macao	41.68	11.40	14.58	7.48	5.05	3.18	0.19	<u>16.26</u>
Teachers		56.41	8.12	9.40	5.13	6.41	2.14	1.28	<u>11.11</u>
Students	I support this company	24.91	<u>31.09</u>	22.47	10.11	6.18	1.50	1.31	2.43
Teachers		37.82	<u>38.24</u>	13.87	5.04	2.94	0.42	0.00	1.68
Students	I hope this company can invest more in Macao	31.51	20.38	<u>23.21</u>	9.06	4.15	1.89	0.19	9.62
Teachers		40.00	<u>22.13</u>	16.60	4.68	2.55	1.28	0.00	12.77
Students	I'd like to work for this company	25.14	<u>34.08</u>	20.67	9.50	4.10	2.05	0.93	3.54
Teachers		31.80	<u>63.60</u>	2.09	1.67	0.42	0.00	0.42	0.00

Further regression analyses were carried out to understand the association between perceived exercise of social responsibility by gaming operators and perceived consideration of Macao's interests and benefits brought to Macao. All respondents were asked how many among the six gaming operators they perceived had considered Macao's interests and brought benefits to Macao. The responses to the two questions were used as

dependent variables, with the five social responsibility factors as independent variables, in two regression equations, each separately for the student and teacher cohorts.

Since possible values of the dependent variables were number of counts from 0 to 6 and there was a preponderance of zeros in the responses, Ordinary Least Square (OLS) regression which assumed normal distribution of variables is not appropriate and will likely lead to seriously biased results where the standard errors are deflated. As these two dependent variables follow more of a poisson distribution, a poisson regression was performed for each cohort.

The poisson regression model for students predicting perceived consideration of Macao's interests from the five social responsibility factors was statistically significant with likelihood ratio chi-square = 165.88, df=5, yielding p-value <.001. Table 8 shows the order of importance of the predictors: Management Practices (the expected log count for a one-unit increase in this factor was .57), Environmental Protection (log count=.31), and Responsible Gambling (log count=.17).

The poisson regression model for teachers was statistically significant with likelihood ratio chi-square=124.06. df=5, yielding p-value<.001. The predictors Responsible Gambling (log count=1.33) and Environmental Protection (log count =.36) were statistically significant.

**Table 8. Poisson regression on consideration of Macao's interests**

	Student N=531					Teacher N=238				
	Mean	Std	B	Std. Error	Wald chi-square	Mean	Std	B	Std. Error	Wald chi-square
Constant			-1.56	0.12	168.4*			-2.31	.19	143.2*
Business and Employment	1.31	1.42	0.05	0.58	.75	1.49	1.64	.05	.085	.34
Community Development	0.81	0.87	-.11	.10	1.19	0.82	0.82	.24	.13	3.79
Responsible Gambling	0.27	0.70	.17	.07	5.14*	0.10	0.28	1.33	.22	35.89*
Management Practices										
Practices	0.51	0.82	.57	.06	78.63*	0.48	0.86	.13	.11	1.28
Env. Protection	0.25	0.68	.31	.06	26.09*	0.36	0.79	.36	.11	11.01*
Deviance	1.08					.71				
Pearson Chi-square	1.94					1.14				

\*p<0.05

On bringing benefits to Macao, the same procedure was conducted. The poisson regression model for students predicting perceived benefits brought to Macao from the five social responsibility factors was statistically significant with likelihood ratio chi-square = 113.63, df=5, yielding p-value <.001. All the five predictors were statistically significant. The poisson regression model for teachers was statistically significant with likelihood ratio chi-square=67.63, df=5, yielding p-value<.001. Only one predictor, Business and Employment, was statistically significant.

The students' perception of benefits brought to Macao was influenced by Management Practices (log count=0.21), Community Development (log count=0.21), Environmental Protection (log count=0.20), and Business and Employment (log count=0.17). Responsible Gambling was significant but had a negative log count of -0.19, indicating that the students did not consider this as a benefit brought to Macao. On the other hand, the teachers perceived Business and Employment as the only benefit brought by the gaming operators (log count=.31) (Table 9).

**Table 9. Poisson regression on benefits brought to Macao**

	Student N=530						Teacher N=233					
	Mean	Std	B	Std. Error	Wald chi-square	Sig.	Mean	Std	B	Std. Error	Wald chi-square	Sig.
Constant												
Business and Employment	1.32	1.42	.17	.04	18.56	.00	1.48	1.65	.31	.05	32.12	.00
Community Development	.82	.87	.21	.07	8.97	.00	.82	.93	.15	.10	2.21	.14
Responsible Gambling	.26	.70	-.19	.08	6.14	.01	.10	.28	.45	.25	3.30	.07
Management Practices	.51	.82	.21	.06	14.25	.00	.47	.87	.03	.10	.07	.80
Env. Protection	.25	.68	.20	.06	12.50	.00	.35	.79	-.01	.10	.08	.93
Deviance	2.52						2.33					
Pearson Chi-square	2.86						3.11					

### Conclusion and Discussion

The study assessed a group of Macao high school students' and teachers' perceptions of the extent of social responsibility being exercised by the six local gaming operators, as well as their support for the operators, and desire for further gaming investment and work opportunities in the gaming sector.

It is observed that both student and teacher response patterns were quite similar. For 12 of the 17 social responsibility items, the majority of the teacher and student respondents who were aware of the issues in discussion answered that only one company, but not necessarily the same one, had been contributing to the items in question. More teachers, however, thought that at least two, instead of only one, gaming companies had shared in the contribution to six socially responsible activities. Over 10% of respondents perceived that all six companies created business opportunities for local enterprises and offered good remuneration, career development and training opportunities to local people. At the same time, the majority of the respondents from both cohorts perceived that no company participated in protecting the environment, beautifying the city, creating a harmonious environment, treating local staff fairly, and promoting responsible gambling.

The 17 social responsibility items were factor analyzed. Five factors were extracted and labeled as Business and Employment; Community Development; Responsible Gambling; Management Practices; and Environmental Protection. Around 44% of the student and 32% of the teacher cohort had personal or familial employment relationships with the gaming operators. Independent t-test results showed that for all five factors, there were no significant differences, in either cohort, between the group that had employment relationship with the gaming operators and the rest that had not.

Descriptive statistics indicated that the majority of both cohorts who was aware of the issues in discussion thought that no gaming operator had considered Macao's interests. Most respondents did not support any particular operator. Most students hoped that one gaming operator could invest more in Macao but most teachers did not wish for any further gaming investment. The majority of students, and more so for teachers, expressed they did not wish to work for any gaming company. Nonetheless, the majority of both cohorts admitted that all six gaming operators had brought benefits to Macao.

The poisson regression model for students predicting perceived consideration of Macao's interests from the five social responsibility factors showed that three factors were significant in influencing such perception: Management Practices, Environment Protection and Responsible Gambling. For the teachers, there were two significant factors: Responsible Gambling and Environmental Protection.

A second poisson regression indicated that students' perception of benefits

brought to Macao was influenced by all five social responsibility factors while the teachers' perception was influenced by only one factor – creation of local business and employment.

There are several implications from the findings. First, most respondents, regardless of occupation, were not aware of any socially responsible activities carried out by the gaming operators. For those who were, most perceived that only one company was contributing to most of the items on the socially responsible activities list. There were six areas of social responsibility related to environment protection, responsible gambling, and fair and harmonious work environment which the respondents perceived as not having any input from the gaming operators. It is recommended that some form of guideline or policy be drawn up by the government or sector associations to regularly devote resources and attention to the exercise of social responsibility in various aspects, particularly in those areas where there is currently a void.

Second, among the five social responsibility factors, both teachers and students felt that the three most important factors that distinguish a company from being regarded as considerate of Macao's interests were protection of the environment, promotion of responsible gambling and introduction of good management practices. This implies that Macao's interests go beyond economic gains and the community hopes for the betterment of the 'common good', as advocated in the literature review ((Hing & McMillen 2002; Black & Ramsay 2003; Harris 2005; Cohran 2007; Lee & Park 2009).

Third, most respondents admitted that the gaming operators had brought benefits to Macao, mainly in the form of creating local business opportunities and employment. If this is the only criterion for success, the gaming operators should be applauded. Nonetheless, the community looks for more than economic growth, especially when gaming also brought about social costs. Naturally, the community will hold the gaming operators responsible for mitigating some of these costs through contribution to social causes such as awarding scholarships, contributing to charity, developing local talents, and preserving a good living environment and quality of life. Now that the gaming operators had achieved considerable economic success for themselves and for the economy, it's time to focus on the wider concept of community enhancement, in order to garner long-term support from the residents. Currently, most respondents perceived that only one company was contributing to several socially responsible activities. Considering the scale of operations and the revenues generated from the gaming business, the community would expect more contribution from the other gaming operators.

Fourth, the respondents were hesitant about further investment in gaming and did not indicate support for any gaming operator. The sentiment was extended to their lack of interest in working for the gaming operators, more strongly so among the teachers. The results were a stark contrast to the time when high school graduating students would quit school and residents would quit stable jobs to get hold of a casino position a few years ago. The recent economic downturn and the massive layoffs may have hampered some interest. Gaming operators will have to work harder in contributing to the community in ways other than providing business and employment, in order to justify further gaming development. Practicing good management is also useful in creating an "employer of choice" image.

Fifth, the majority of the respondents felt that there was inadequate community and governmental audit on gaming operators' exercise of social responsibility. Macao is currently seven years into post-monopoly gaming development. The community has grown more aware of the benefits and costs associated with gaming. There have already been voices in the public calling for more attention to social responsibility by large corporations. Gaming operators should seriously consider instilling in all levels of management a genuine sense of concern for the well-being of the community they reside in. Continued training and awareness programs could shape management principles and outlook on the topic of social responsibility.

For an effective social audit to take place, the following steps are suggested: identify

the stakeholders, carry out stakeholder dialogues (such as focus groups and surveys), develop social responsibility performance indicators, and produce audit reports verified by a legitimate third-party (Henriques 2001). The Macao community could consider forming a gaming impact audit group to study, monitor and feedback public opinions and comments to the industry and government. Gaming operators could be proactive too by developing a credible social audit system. This two-way interaction would satisfy the new social contract increasingly demanded by the community, maintain a heightened sense of alertness to potential conflicts and preserve a clear organizational conscience that employees can be proud of.

### **Limitation**

The study had sampled only high school graduating students and teachers. This limits the generalizability of the results. Future studies can consider adopting a random sampling approach to draw a more representative sample of the Macao population.

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