Macao’s Tourism Industry and its Dependence on Mainland China

Ji Guo, Beijing Normal University, China

ABSTRACT

This paper intends to analyze the status quo of Macao’s tourism industry, especially its relation with number of mainland and international visitors. It is found that the Macao’s tourism income is significantly correlated with changes in the number of visitors from mainland China. Combined with its reliance on gaming industry alone, it puts Macao’s economy at serious risk.

INTRODUCTION

As the largest pillar of Macao’s economy, the gaming industry underwent rapid development after the takeover by China, which promoted the hotel, retail and other related industry growth. Macao has seen its position as a regional center of gaming and tourism greatly enhanced.

Overall Macao recorded strong economic growth and improving the business environment since return to China. Particularly in terms of economic output, from 2002 to 2007 the average annual real GDP growth rate of Macao is 17%. Per capita GDP in 2007 reached 289,200 patacas, higher than Hong Kong and Taiwan ranking third in Asia.

Making the greatest contribution to Macao’s economic growth, the tourism sector, especially gaming industry has recorded marvelous development. In 2002, the government took the historic step of opening up the previously monopolized gaming sector to three concessionaires, namely, Sociedade de Jongos de Macao (SJM), Wynn Resorts, and Galaxy. Further, the Macao government allowed the three licensees to have sub-concessions with three other investors, Galaxy with Venetian, SJM with MGM Grand Paradise, and Wynn with Melco PBL Jogos (Eadington and Siu, 2007; Siu, 2005, 2006). Huge foreign investment flew into the territory as a result. While foreign investment amounted to 1065 mn Patacas in 2000, it increased to 12,957 mn Patacas in 2006 (Macao Statistics and Census Services, 2000–2006). In 2008, the number of casinos increased from 11 before the handover to 31, the number of gaming tables and slot number were increased by 915 and 1416 times respectively in 2003. During the global financial crisis, with the “Free Travel Scheme” limited and the surrounding cities opened competitive gambling business one after another, Macao’ gaming gross income still achieved 31% growth rate, and exceeded 100 billion patacas (MOP) landmark. Driven by the gaming industry, Macao significantly increased its attraction for tourists. After the implementation of “Free Travel Scheme” program the tourism market is expanding rapidly. Table 1 shows that the number of visitor arrivals in 2008 increased 212 times since 2002. Of all visitors 97% are from mainland China, Hong Kong, Taiwan and Southeast Asia. Visitors are increasing per capita consumption, which in 2007 reached 1637 MOP, representing a 19% increase from 1999; at the same time, the hotel occupancy rate remains 70% or more since 2004.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of table games</th>
<th>Number of slot machines</th>
<th>Gross income of gaming industry (million MOP)</th>
<th>Number of tourists (1000s)</th>
<th>Hotel occupancy rate (%)</th>
<th>Consumption per tourist</th>
<th>Total retail sales (million MOP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>—</td>
<td>—</td>
<td>22843</td>
<td>11531</td>
<td>67.1</td>
<td>1454</td>
<td>5223</td>
</tr>
<tr>
<td>2003</td>
<td>424</td>
<td>814</td>
<td>29476</td>
<td>11888</td>
<td>64.3</td>
<td>1518</td>
<td>6268</td>
</tr>
<tr>
<td>2004</td>
<td>1092</td>
<td>2254</td>
<td>42306</td>
<td>16673</td>
<td>75.6</td>
<td>1633</td>
<td>7518</td>
</tr>
<tr>
<td>2005</td>
<td>1388</td>
<td>3421</td>
<td>45800</td>
<td>18711</td>
<td>70.9</td>
<td>1523</td>
<td>8779</td>
</tr>
<tr>
<td>2006</td>
<td>2762</td>
<td>6546</td>
<td>55884</td>
<td>21998</td>
<td>72.2</td>
<td>1610</td>
<td>10659</td>
</tr>
<tr>
<td>2007</td>
<td>4375</td>
<td>13267</td>
<td>83847</td>
<td>26993</td>
<td>77.2</td>
<td>1637</td>
<td>14195</td>
</tr>
<tr>
<td>2008</td>
<td>4017</td>
<td>11856</td>
<td>109826</td>
<td>22907</td>
<td>74.5</td>
<td>—</td>
<td>18922</td>
</tr>
</tbody>
</table>

However, the "crowding out" effect of the pattern of one dominant industry is being gradually highlighted. After the handover, especially granting of the right to open gambling and the abolition of global textile trade quotas, the gaming industry’s "one industry dominance" situation continued to strengthen, with the other industries more and more crowded out. This type of industrial structure with one dominant industry of gaming causes economic volatility.

This paper intends to analyze the status quo of Macao’s tourism industry, especially its relation with number of mainland and international visitors. It is found that the Macao’s tourism income is significantly correlated with changes in the number of visitors from mainland China. Combined with its reliance on gaming industry alone, it puts Macao’s economy at serious risk.

**ANALYSIS OF TOURISM INDUSTRY**

**Importance of the industry**

Tourism has a pivotal position in Macao's economy. First of all tourism has brought a lot of foreign exchange earnings to Macao, which can be seen in table 1

Secondly it is the main source of Macao government’s revenue. In 1984 the Macao government's tax revenue was 854 million patacas, of which Macao Tourism and Entertainment Company paid 445 million patacas, accounting 52% of total tax revenue. In 1991, of the Macao government's total revenue of 81 billion patacas, gaming Franchise contributed 2.567 billion patacas, accounting for 31.69% of total revenue. Gaming revenue is still increasing; in addition, tourism revenue other than gaming is increasing fast. In 2008 the sum of Macao Government tourist tax revenue and gaming revenue accounted for 75% of total government revenue. Macao's gambling-based tourism has become Macao Government's most important source of revenue.

Thirdly, Macao tourism industry provides many jobs for citizens of Macao. The development of tourism industry needs many matching services, such as hotel industry, food industry, shops and entertainment facilities. Currently, over 4 million people in Macao's working population are directly engaged in hotels, travel agencies, restaurants and other tourism-related work, which is about 20% of total employment and 12% of the total population of Macao.

Finally, Macao tourism helps improve city infrastructure. In the franchise contract signed by the government of Macao and Macao tourism and entertainment companies, these companies have to bear the economic, social, cultural and infrastructure and funding obligations, such as the construction of luxury hotels; subsidized electricity, dock, sea, pier, reclamation schools and residential construction.

**Empirical evidence on the relation between Macao’s tourism and number of visitors**

Macao’s tourism industry was hit hard by the 1997 financial storm and SARS in 2003. The Chinese central government offered a helping hand on July 28, 2003 by opening the first four designated cities in Guangdong province (Dongguan, Foshan, Zhongshan, Jiangmen) for “Free Travel Scheme” program, aiming to bring large numbers of tourists to Macao in order to stimulate consumption. After nine rounds of opening up, the total number of open cities has reached 49 in the Mainland including provincial capitals except Harbin, Qingdao, Xi'an, Taiyuan. As a consequence, Macao saw a surge in visitor arrivals. In 2003 Macao received 5.74 million visitors from the Mainland which number increased to 14.6 million in 2007. However, with the gradual increase in the number of people who go to Macao just to gamble, the relationship between Macao and neighboring areas would be negatively impacted. Coupled with inadequate infrastructure facilities Macao tourist reception capacity faces a bottleneck and increasing risks.

In order to find out the relation between Macao’s tourism and number of visitors from overseas, ordinary least squares regressions are run for these two equations:

1. \[ G_t = \alpha + \beta_1 M_t + \beta_2 T_t + \beta_3 H_t + F_t + \varepsilon \]
2. \[ Y_t = \alpha + \beta_1 M_t + \beta_2 T_t + \beta_3 H_t + F_t + \varepsilon \]

Here M, T, H, and F represent monthly number of visitors from Mainland China, Taiwan, Hong Kong and rest of the world respectively. G and Y represent monthly gaming gross income and total tourism income measured by thousands of patacas respectively. Time of the data is from January 2004 to December 2009. Regression results are
reported in the following table:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Constant</th>
<th>M</th>
<th>T</th>
<th>H</th>
<th>F</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>1223884.32</td>
<td>7129.33</td>
<td>2534.62</td>
<td>1490.43</td>
<td>1903.83</td>
<td>0.903</td>
</tr>
<tr>
<td></td>
<td>(13.43)</td>
<td>(5.46)</td>
<td>(4.99)</td>
<td>(3.53)</td>
<td>(4.72)</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>3579347.48</td>
<td>7974.56</td>
<td>3597.87</td>
<td>2539.85</td>
<td>3054.64</td>
<td>0.932</td>
</tr>
<tr>
<td></td>
<td>(12.95)</td>
<td>(5.11)</td>
<td>(4.33)</td>
<td>(3.29)</td>
<td>(3.78)</td>
<td></td>
</tr>
</tbody>
</table>

This table contains important information about Macao’s gaming and tourism industry as a whole. Given the importance of Macao’s tourism industry, it tells us a lot about Macao’s economy especially its weaknesses.

It can be seen from table 2 that gross income of Macao’s gaming and tourism industry is significantly correlated with numbers of visitors from Mainland China, Taiwan, Hong Kong and rest of the world. The coefficient on M is 7129.33 for gaming income, which means for every thousand more visitors from mainland China, Macao’s gaming industry has 7129.33 patacas more income. Likewise, for every one thousand more visitors from mainland China, Macao’s whole tourism industry has 7974.56 patacas more income.

It is interesting to compare the impact of mainland Chinese visitors with that of other parts of the world on Macao’s gaming and tourism income respectively. Mainland Chinese visitors apparently have higher impact on Macao’s gaming and tourism income than visitors from other parts of the world. However the difference between the coefficients of M of equation 1 and equation 2 is smaller for mainland Chinese visitors than visitors from other parts of the world. This obviously means mainland Chinese visitors spend more money on gambling on the average than other visitors. Presumably visitors from other parts of the world spend more money on cultural and shopping activities.

In the introduction section of this paper it is mentioned that the one dominant industry pattern is a risky choice for Macao’s economy. Here it can be seen that Macao’s economy is highly dependent on mainland Chinese visitors who come to Macao for the purpose of gambling mainly. This makes the economy more prone to economic turbulence because it is vulnerable to external shocks. Many of the mainland Chinese visitors are civil servants and the money they take with them is of doubtful sources. It is hard to imagine an economy can sustain such high growth rate depending on inflow of money which is in conflict with the government of the source of it.

As public resources and preferential treatment are granted to the tourism sector, traditional industries such as manufacturing are ignored. Manufacturing workers comprise most of unemployment, and the employed suffer from stagnating or decreasing salaries in face of increasing inflation. Although manufacturing workers’ median monthly salary increased from 2960 Patacas in 2000 to 3140 Patacas in 2006, the price level during the same time period increased by 9%. In other words, adjusted for inflation, they earned less than before. Civil servants, usually thought to have close alliances with the ruling class in most countries, also saw their quality of life decrease. Although they bore the same externalities as any other social groups, their median monthly salary increased only from 13,742 Patacas in 2000 to 14,793 Patacas in 2006. The real change after adjusting for inflation is negative even though public revenue more than doubled during the same period of time. In addition, civil servants must now pay income tax, despite exempt before the handover (Macao Statistics and Census Services, 2000–2006).

The uneven distribution of revenue generated by the tourism boom widens the social gap at an ever-greater pace. Although per capita GDP increased 2.56-fold from 2000 to 2007, the median monthly income increased only 1.62-fold during the same period. According to Ho and Han (2008), in 2006, 10% of the highest earning people shared nearly 30% of total income, and 30% of the lowest earning people shared only approximately 10% of the total income. Many local residents are worse off in absolute terms. The number of Macao residents living below the poverty level increased from 91,845 in 2003 to 117,427 in 2006. Even more seriously, the number of Macao residents living below the subsistence level increased from 9690 to 22,000 during the same time period. This is in contrast to the fact that Macao is one of the richest economies worldwide in terms of per capita GDP. Macao’s Gini-coefficient, which measures income distribution, increased from 0.43 in 1999 to 0.52 in 2007. It is generally assumed that if a Gini-coefficient is higher than 0.4, social division arises, and if it is over 0.5, social tension and political instability emerge (Ho & Han,
The increasing level of social tensions are reflected in more frequent street demonstrations recently, which sometimes resulted in violent crashes, damaging Macao’s international image. In terms of opinion polls, relative to the overall positive and even euphoric attitudes and high expectations of Macao’s Chinese community at the beginning of the handover, the Macao SAR government’s rate of support (satisfaction with government’s policy address) has decreased drastically to 24.8% overall (Shimin Daily, December 31, 2007).

CONCLUSION

According to regression and correlation analysis in section 2, the number of Mainland visitors and the Macao tourism income show a highly significant positive correlation. The number of Mainland visitors accounted for 55% of Macao’s tourists. If the Mainland shows the slightest sign of trouble, Macao's tourism industry will be directly affected as well as the economy as a whole. Macao should actively explore diversified international customer base and reduce dependency on the mainland. Macao’s government should consider cutting advertisement on gaming and attract tourists who do not come just for gambling. Advertisements should be more directed at promotion of Macao's cuisine, shopping, art, unique attractions, history and culture for example, Macao World Heritage sites. New tourism products such as thematic tourism products, wedding / honeymoon travel, etc., should be developed so that visitors can have a different feel, which would help the development of diversified customer base.

There is enough reason to view part of Macao gaming revenue as a generous subsidy granted by mainland Chinese governments to their Macao counterpart. Obviously, this is one of the ways for Mainland China to support the Macao economy given the legal prohibition of gambling within the Mainland. It is then unreasonable to give up the resulting economic rents as a subsidy to the Macao public and give them to the local private sector or the out-of-area investors through an arbitrary or ad hoc tax cut. Given the over-reliance on casinos for income growth, industrial diversification has emerged as an increasingly important economic issue facing Macao due to the high likelihood that Mainland China may have to tighten its FTS policy once pathological gambling becomes too serious in Macao. If this happens, its casino business will get hit badly. It seems that Macao does not have many other viable development opportunities, so that there have been talks about diversification for years without concrete action. By contrast, the Las Vegas Strip has achieved a success in diversifying tourism industries, for ‘‘non-gaming revenue on the Strip in fiscal year 2008 accounted for more than 60% of total revenue compared to just 40% 15 years earlier’’ (AGA 2009b, p. 7). But this task is by no means easy for Macao which gets used to making quick money, because of its tiny land size, its limited local infrastructure, and its deficient human capital. There are two practical ways to create re-development incentive and foster economic diversification towards MICE industries. One is to maintain the current regime of casino taxes as a revenue source to make up for tax cuts or tax credits to be provided for diversified entertainment ventures. The other is to induce casino operators to invest their retained profits in non-gaming sectors to cash in on the spillover effects it has created (Li et al. 2010). The local economy can then be directed on a more balanced and sustainable growth path, and will become less susceptible to external demand shocks or gaming market cycles.

REFERENCES
