

# ***Analysis of the Impact of COVID-19 on Macao's Gambling Industry***

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**Abstract:** Macao, known as the "Monte Carlo of the East" and the "Las Vegas of Asia", has suffered a huge impact and unprecedented impact from the COVID-19 pandemic since its return to China. The negative impact of the pandemic has hampered the flow of people, reducing the number of tourists to Macao and the profitability of related industries, which has affected the revenue of Macao's gambling industry. This study used data research to study Macao's gambling industry and analyzed the impact of COVID-19 on Macao's gambling industry through relevant data before and after the epidemic, obtained from the Macao Bureau of Gaming Supervision, the Macao Bureau of Statistics, news media, and other channels. In addition, according to the current situation in Macao, if the gambling industry wants to recover from the status quo of difficult long-term development caused by the single industrial chain and the impact of physical casinos caused by the epidemic, it is necessary to clarify the development ideas, improve the industrial chain, and establish a diversified industrial system.

**Keywords:** COVID-19, Macao gambling industry, Macao tourism, development strategy

## **1. Introduction**

As a very special industry in the world and the pillar industry of Macao, the gambling industry plays an extremely important role in the development of Macao. As the only legal gambling industry in China, Macao's gambling industry has been its pillar industry since its return to China. It can be said that its economic level is inextricably linked to the development of the gambling industry. Since the outbreak of COVID-19 in late 2019, when Chinese people responded to the government's call to stay at home, the pandemic has affected all walks of life to varying degrees. The media industry has paid great attention to many industries during the epidemic, but few scholars and experts have analyzed the impact of the epidemic on the gambling industry. So the research to the "new crown outbreak on the impact and future development of Macao's gambling strategy analysis" as the theme, mainly on the impact of the new champions outbreak of Macao's gambling. This research aims to put forward some strategies for Macao's future development under the uncertain situation of the epidemic.

## **2. The Gambling Industry in Macao**

Since 2002, the average annual growth rate of Macao's GDP has been about 15%. In 2007, Macao's per capital GDP surpassed that of Hong Kong for the first time; In 2010, Macao's per capital GDP

reached \$51,000, the most in Asia [1]. The development of Macao's per capital GDP is closely related to its major industry--the gambling industry. From 2003 to 2019, the proportion of gross profit of gambling industry in total revenue of Macao is shown in the following table [2] (Data of eight years during the period are captured. In 1999, Macao returned to China, and in 2003, the official website of Macao began to record the data of gambling revenue).

Table 1: The ratio of gross gaming profits to Macau's annual GDP. (Unit: Million Mop)

Year	Gross gaming profit	Macao's annual GDP	Proportion
2003	28773	66146	43.5%
2005	46046	97416	47.3%
2008	108769	168639	64.5%
2011	267868	295438	91%
2013	360748	411729	87.6%
2015	230840	359708	64.2%
2017	265743	404839	65.6%
2019	292455	445530	65.6%

From the data above, it can be seen that since the official data record of Macao was established in 2003, the revenue of the gaming industry has accounted for a huge proportion of the Macao economy. Since 2008, it has exceeded 60%, and the data in the following years has been very stable. This is enough to see the gaming industry plays a key role in Macao's economic development and deserves to be regarded as Macao's main industry.

Since the outbreak of the coronavirus in 2020, most sectors in China have been hit, with the service sector hit the hardest. China's tourism industry has been hit harder than ever by the government's call for people to stay at home to prevent the spread of the virus. Gambling and tourism are Macao's main industries. After the epidemic, Macao's tourism industry has also suffered a huge impact, as gambling and tourism are closely related. Statistics from Macao's Statistics and Census Bureau show that the number of arrivals in Macao in December 2019 was 3,083,406, while the number of arrivals in February 2020 was only 5.1 percent of December 2019, with 156,394 arrivals.

### 3. Data Analysis

#### 3.1. During Outbreak of the Pandemic

Table 2: Monthly lucky gaming gross revenue in 2020 and 2019. (Unit: Million Mop)

Monthly Lucky Gaming Gross Revenue in 2020 and 2019						
	Monthly Gross Income			Cumulative Gross Income		
	Y2020	Y2019	Rate of Change	Y2020	Y2019	Rate of Change
January	22,126	24,942	-11.3%	22,126	24,942	-11.3%
February	3,104	25,370	-87.8%	25,229	50,312	-49.9%
March	5,257	25,840	-79.7%	30,486	76,152	-60.0%
April	754	23,588	-96.8%	31,240	99,739	-68.7%
May	1,764	25,952	-93.2%	33,004	125,691	-73.7%
June	716	23,812	-97.0%	33,720	149,503	-77.4%

Table 2:(continued).

July	1,344	24,453	-94.5%	35,064	173,956	-79.8%
August	1,330	24,262	-94.5%	36,394	198,218	-81.6%
September	2,211	22,079	-90.0%	38,605	220,297	-82.5%
October	7,270	26,443	-72.5%	45,875	246,740	-81.4%
November	6,748	22,877	-70.5%	52,623	269,617	-80.5%
December	7,818	22,838	-65.8%	60,441	292,455	-79.3%

The Table 2 compares Macao's gross gaming revenue in 2019 and 2020. In 2020, the first year of the outbreak, from February (the first month of the outbreak), the gross revenue of the gambling industry fell extremely, from 22126 million MOP in January to 3104 million MOP, a decline of 86%, compared with a decline of 87.8 percent in February 2021. In the following ten months, the income remained below 10 million MOP, and the income remained at a very low level from April to September, with a change rate of more than 90%. It was not until October that the income improved significantly, but it was still less than half of that in January. From the perspective of cumulative gross income, the change rate of cumulative gross income from February to September shows a trend of continuous increase, and since February, the change rate has maintained a large value in 2020.

In order to prevent the occurrence of high gambling revenue in 2019 due to the influence of economic and political factors, the data of 2020 is compared with the data of years before 2019, and the following analysis is made in this study.

Table3: Monthly lucky gaming gross revenue in 2018 and 2017.(Unit: Million Mop)

Monthly Lucky Gaming Gross Revenue in 2018 and 2017						
	Monthly Gross Income			Cumulative Gross Income		
	Y2018	Y2017	Rate of Change	Y2018	Y2017	Rate of Change
January	26,260	19,255	+36.4%	26,260	19,255	+36.4%
February	24,300	22,991	+5.7%	50,560	42,246	+19.7%
March	25,950	21,232	+22.2%	76,510	63,479	+20.5%
April	25,728	20,162	+27.6%	102,239	83,640	+22.2%
May	25,489	22,742	+12.1%	127,727	106,382	+20.1%
June	22,490	19,994	+12.5%	150,217	126,377	+18.9%
July	25,327	22,964	+10.3%	175,544	149,340	+17.5%
August	26,559	22,676	+17.1%	202,103	172,016	+17.5%
September	21,952	21,362	+2.8%	224,055	193,378	+15.9%
October	27,328	26,633	+2.6%	251,383	220,010	+14.3%
November	24,995	23,033	+8.5%	276,378	243,043	+13.7%
December	26,468	22,699	+16.6%	302,846	265,743	+14.0%

Table 4: Monthly lucky gaming gross revenue in 2019 and 2018. (Unit: Million Mop)

Monthly Lucky Gaming Gross Revenue in 2019 and 2018						
	Monthly Gross Income			Cumulative Gross Income		
	Y2019	Y2018	Rate of Change	Y2019	Y2018	Rate of Change
January	24,942	26,260	-5.0%	24,942	26,260	-5.0%
February	25,370	24,300	+4.4%	50,312	50,560	-0.5%
March	25,840	25,950	-0.4%	76,152	76,510	-0.5%
April	23,588	25,728	-8.3%	99,739	102,239	-2.4%
May	25,952	25,489	+1.8%	125,691	127,727	-1.6%
June	23,812	22,490	+5.9%	149,503	150,217	-0.5%
July	24,453	25,327	-3.5%	173,956	175,544	-0.9%
August	24,262	26,559	-8.6%	198,218	202,103	-1.9%
September	22,079	21,952	+0.6%	220,297	224,055	-1.7%
October	26,443	27,328	-3.2%	246,740	251,383	-1.8%
November	22,877	24,995	-8.5%	269,617	276,378	-2.4%
December	22,838	26,468	-13.7%	292,455	302,846	-3.4%

As can be seen from the data in the above two tables (Table 3 and Table 4), compared with the gross revenue of the gambling industry in 2017, the gross revenue of the gambling industry in 2018 has been greatly improved, with some months exceeding 20% or 30%, which is the result of economic development and other factors. The profile also shows that the development of the gambling industry in Macao was very good before the epidemic. Compared with the revenue in 2018, the revenue of the gambling industry in 2019 shows a stable development situation and is less affected by other factors, so it is possible to exclude other factors that have a significant impact on the revenue of the gambling industry in this year. From the above data and analysis, it can be concluded that the COVID-19 epidemic has had a huge impact on Macao's gambling industry. From the above data and analysis, it can be concluded that the COVID-19 pandemic has had a huge impact on Macao's gambling industry.

### 3.2. Post-pandemic Period

Although the epidemic situation is still in an unstable state after 2021, compared with 2020, the epidemic situation has been basically controlled except for small outbreaks in some areas.

Table 5: Monthly lucky gaming gross revenue in 2021 and 2020. (Unit: Million Mop)

Monthly Lucky Gaming Gross Revenue in 2021 and 2020						
	Monthly Gross Income			Cumulative Gross Income		
	Y2021	Y2020	Rate of Change	Y2021	Y2020	Rate of Change
January	8,024	22,126	-63.7%	8,024	22,126	-63.7%
February	7,312	3,104	+135.6%	15,336	25,229	-39.2%
March	8,306	5,257	+58.0%	23,642	30,486	-22.5%
April	8,401	754	+1014.4%	32,043	31,240	+2.6%
May	10,445	1,764	+492.2%	42,487	33,004	+28.7%
June	6,535	716	+812.5%	49,023	33,720	+45.4%

Table 5:(continued).

July	8,444	1,344	+528.1%	57,467	35,064	+63.9%
August	4,442	1,330	+234.0%	61,908	36,394	+70.1%
September	5,879	2,211	+165.9%	67,787	38,605	+75.6%
October	4,365	7,270	-40.0%	72,152	45,875	+57.3%
November	6,749	6,748	+0.01%	78,901	52,623	+49.9%
December	7,962	7,818	+1.8%	86,863	60,441	+43.7%

Although the epidemic situation is still in an unstable state after 2021, compared with 2020, the epidemic situation has been basically controlled except for small outbreaks in some areas. As can be seen from the figure above (Table 5), gambling revenue recovered to some extent in 2021. Compared with the same month data in 2020, the revenue in April 2021 was 8401 million MOP. Compared with April 2020, the change rate reached 1014.4%. May, June, and July also reached 492.2%, 812.5%, and 528.1%. But even with such a high rate of change, income is still statistically below pre-pandemic levels and less than half of 2019 gross income when compared to 2019 figures, proving that in the post-pandemic era, even if the pandemic is largely contained, its impact on gambling revenues is still impossible to change fundamentally.

Table 6: Monthly lucky gaming gross revenue in 2022 and 2021. (Unit: Million Mop)

Monthly Lucky Gaming Gross Revenue in 2022 and 2021						
	Monthly Gross Income			Cumulative Gross Income		
	Y2022	Y2021	Rate of Change	Y2022	Y2021	Rate of Change
January	6,344	8,024	-20.9%	6,344	8,024	-20.9%
February	7,759	7,312	+6.1%	14,102	15,336	-8.0%
March	3,672	8,306	-55.8%	17,774	23,642	-24.8%
April	2,677	8,401	-68.1%	20,452	32,043	-36.2%
May	3,341	10,445	-68.0%	23,792	42,487	-44.0%
June	2,477	6,535	-62.1%	26,269	49,023	-46.4%
July	398	8,444	-95.3%	26,668	57,467	-53.6%
August	2,189	4,442	-50.7%	28,857	61,908	-53.4%

In mid-June 2022, the first large-scale outbreak occurred in Macao. As a result, offline casinos were forced to close due to the epidemic for the first time in July, and did not open until early August. Because of the pandemic and casino closures, gross revenue for the whole of July was 39.8m MOP, the lowest since Macao's gambling industry began keeping official statistics. The outbreak hit Macao in June, July and August, which are prime time for tourism, so it also dealt a huge blow to Macao's tourism industry.

#### 4. Analysis of Future Development Strategy

##### 4.1. Current Limitations

Gambling industry has such a high status in Macao, and its income also accounts for a high proportion of the total income of Macao, which reflects the relatively simple industrial structure of Macao from the side. The fact that the pandemic has had such a big impact on the gaming industry also speaks to

the relatively unitary structure of Macao's gaming industry. However, if there is no management strategy for future uncertainties, Macao's gambling industry will probably fall into crisis again.

The casinos in Macao mainly target mainland Chinese tourists, which is related to the habit of gambling in mainland China. In 2010, Singapore legalized gambling. In addition, the Philippines, Malaysia and other Southeast Asian countries also established legal casinos, which directly affected Macao's gambling industry [3]. Southeast Asian countries are relatively close to China. Besides, the tourism resources of Southeast Asian countries are richer than Macao and the landscape is very different, which is very attractive to Chinese tourists. Although in the past few years, seeing led to difficulty in traveling abroad, making a large part of the mainland tourists' travel plans and gambling will be directed by the southeast Asian countries to Macao, but the countries of southeast Asia's tourism gradually perfecting and maturing might be at the end of the outbreak "steal" a big part of tourists.

Secondly, the development of the gambling industry has provided a large number of local jobs, and nearly three-quarters of the local residents are engaged in the gambling industry. However, even though such a large number of people are engaged in the gambling industry, the quality of human resources is low. Talents with high-level management experience and knowledge in the gambling industry are scarce, and most of the employees have a low level of education. Such a huge number of people are engaged in the gambling industry. In the future, if there are changes in the gambling industry in Macao, which leads to salary cuts or layoffs, it will directly affect the decrease of Macao's per capital income and the straight decline of unemployment rate, and various social discordancy events will occur in a short time. So it is dangerous for Macao to rely so heavily on the growth of gambling without a plan for the future.

## 4.2. Strategy of Sustainable Development

Las Vegas has had casinos for more than 70 years before Macao developed its gambling industry. Although the establishment of Macao's gambling industry depends on policies while that of Las Vegas depends on the market, in terms of development approaches and changes in surrounding industries, Macao and Las Vegas are very similar. But in the 1980s and 1990s Las Vegas transformed itself from a casino economy to a combination of sightseeing, shopping, food and family travel. In 2007 gambling revenues were \$9 billion, but non-gambling revenues were \$11 billion [4]. Therefore, in the future development, Macao should reduce the proportion of gambling industry in the local economic income and develop diversified tourism to ensure sustainable development in the future.

For the lack of Macao's high-level management experience and knowledge of talents, the government should strengthen the importance of education, the establishment of more colleges and universities, attract overseas talent, strengthen the gaming industry, and connect science and technology for the future development of Macao's gambling and management tactics to provide more and also to Macao tourists from different regions to provide more kinds of service.

In addition, Macao should actively participate in the development of Hengqin New Area. To a large extent, the construction of Hengqin New Area has solved the disadvantage of Macao's small land and provided Macao with more development space. Based on Hengqin, Macao should establish a comprehensive tourism service group with the mainland to provide different levels of services. In addition, with the support of government policies, Macao should actively invest in the development of high-tech industries, introduce large enterprises with international competitiveness, well-known brands and independent property rights, and incubate innovative new small and medium-sized enterprises [5]. According to the local advantages of Macao and the development status of the mainland, online games, software development, gambling technology, electronic (entertainment) equipment and its supporting design, energy and environmental protection technology, marine

pharmaceuticals and Chinese patent medicine, health care products research and development can become the development direction of the science and technology industry [6].

## 5. Conclusion

The coronavirus pandemic has had a huge impact on Macao's gaming industry. Data from the first seven years of 2020 and from 2020 to the present show that the decline in tourist numbers due to the coronavirus pandemic has significantly reduced revenue at Macao's major casinos. The uncertainty over when the current coronavirus pandemic will end means Macao's gaming industry will have to adjust for the future. At the same time, it is necessary to reduce the number of employment in the gambling industry, increase the construction of universities, take advantage of Hengqin New Area to develop diversified tourism, develop innovative industrial clusters and high-tech industries, and prevent the uncertain impact of the epidemic on the income of local employees. In this study, the data of the paper are all based on the papers and reports of the Bureau of Statistics of Macao, Macao Bureau of Sport Supervision, and scholars and researchers. Due to age restrictions and school rules and regulations, it is impossible to enter the casino for field investigation, which is also an unavoidable defect of this study. It is hoped that other researchers can conduct internal investigations in future studies to improve the study on the impact of the epidemic on Macao's gambling industry. After industrial adjustment and upgrading, other researchers are also expected to conduct further investigation and research on how to settle the excess employees of casinos, how to replan the number and scale of casinos, and whether there is a better adjustment direction.

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