

RESEARCH LETTER



The impact of the coronavirus outbreak on Macao. From tourism lockdown to tourism recovery

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ABSTRACT

Macao was one of the first cities outside China to start a gradual tourism lockdown in January 2020 due to the coronavirus outbreak. Although critical to Macao's economy, tourism had essentially ceased by March 2020, as the city closed its borders to regional and foreign arrivals. This paper presents the key policy and health measures since Macao's first coronavirus case in January. The city had recorded no coronavirus cases in the city in early March, but saw a second wave of imported coronavirus cases mostly as residents and non-resident workers returned from overseas. At the request of government, over 10% of Macao's hotel room inventory had been allocated as quarantine hotels. The 'top-down' approach by government meant stringent policy measures consisting of border closures and health advisories were actioned immediately to stem the spread of coronavirus. The economic consequences to the casino industry, which supplies 85% of the government's total tax revenues, have been dramatic, as casino revenues continue to spiral downwards by over 80% in both February and March. This paper presents Macao's reaction to the coronavirus in a three-wave analogy. It is argued that the recovery wave should move to public-private consolidation and collaboration.

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Introduction – the emergence of coronavirus and initial reactions by Macao

On 29th December using a system established for severe acute respiratory syndrome (SARS), local hospitals in Wuhan identified the first four cases of novel coronavirus (2019-nCoV) all linked to the Huanan Seafood Wholesale Market. There was evidence that the virus was zoonotic (Li et al., 2020). Coronavirus later renamed COVID-19, was declared a global pandemic on 12th March (Asia Gaming Brief, 2020a). It is estimated the pandemic will create economic losses of nearly US\$100 billion and put at risk more than 50 million jobs, presenting a severe treat to tourism and the world's economy (PATA, 2020). IATA is reporting an estimated US\$113 billion loss (19%) in passenger revenues in 2020 (Pearce, 2020).

The travel and tourism policy responses internationally since the announcement of novel coronavirus in December 2019 have varied. This paper tracks policy reactions as coronavirus cases emerged in Macao, a Special Administrative Region (SAR) within China. Macao became the first city outside Mainland China to enact a tourism lockdown (Keegan, 2020a). The casino city as one of the most densely populated regions globally, has been highlighted from its response and ability to fight of coronavirus (Barrett & McGregor, 2020). The consequences to tourism and gaming revenues as a result of the travel lockdown have been considerable resulting in almost zero daily visitation by April 2020. The casino city's Easter weekend break in April 2020 recorded only 810 visitors, down 99.8%

compared to the same holiday period in 2019, and the month's daily average of 115,000 visitors. Casino revenues of US\$3 billion in April 2019 was expected to drop to as much as 95% should the lockdown continue that month (Macau Daily Times, 2020).

The paper divides Macao's coronavirus response into three fundamental waves highlighted in Table 1. The first wave documents Macao Government policies and responses as coronavirus initially appeared in the city on 22nd January. This was caused by a mix of tourists and residents returning to the city. The second wave some weeks later presents policies to deal with new imported cases returning from overseas such as Europe. The third wave reflects on tourism recovery for the city, moving from border lockdown, to a gradual reopening to visitors. In 2019, travel and tourism in Macao contributed to 72.2% of the total economy, and 50.2% of total employment (World Travel & Tourism Council, 2019). Tourism and hospitality sector recovery is therefore critical to Macao's success.

The casino city, as one of the most densely populated regions in the world at 48,003 people per square mile, had initially only 10 recorded coronavirus cases. All would recover and be discharged from hospital (Keegan, 2020a). The first imported case travelling from Portugal was recorded in Macao after experiencing over a month of no reported cases in the city (Asia Gaming Brief, 2020a). This was the start of a 'second wave' of imported virus cases within Macao. The Macao authorities rapidly enacted more stringent entry conditions in response to these new cases. This paper will show that the 'top-down' approach of Macao's government to swiftly execute policies has been a key part of the first and second wave success to control the spread of the virus. Globally there has been statements to consider what tourism post-coronavirus should look like. Spurred by the massive economic losses to Macao's gaming and tourism industry by the tourism lockdown, and Macao's prevailing politico-administrative state, this paper asserts that there will be marginal changes in Macao's tourism recovery direction in the immediate term with even greater reliance and dominance of the casino sector and Chinese visitation.

Macao's tourism backdrop – casino and Chinese visitation reliance

Macao is a casino-based economy. From Macao's total US\$14.4billion taxation revenue in 2019, casino taxation provided US\$12.3billion (85%). The Government spent US\$12.4billion (Macao Financial Services Bureau, 2020). The annual surplus has created total fiscal reserves of over US\$72.5billion (Asia Gaming Brief, 2020b), and a GDP (gross domestic product) per capita of US\$79,975 (Census and Economic Information Center, 2020), one of the highest in the world. The International Monetary Fund (IMF) acknowledged that the high reserves provided a strong buffer against shocks to Macao's economy, but warned that Macao's economy was vulnerable to policy and economic developments in Mainland China given that most tourists originated from there (IMF, 2019).

As coronavirus cases grew in China, by 25th January 2020, the Chinese authorities had stopped issuing visas for groups and Independent Visitor Scheme (IVS) visits to Macao (Table 1). In 2019, Macao had over 39 million visitors, representing 27.9 million (71%) from China, 7.4 million (19%) from Hong Kong, and 1.1 (3%) from Taiwan respectively (Macao Statistics and Census Department, 2020a). 13.1 million Mainland Chinese visited Macao on an IVS visa (Macao Statistics and Census Department, 2020a). The travel restriction policy had dramatic negative impacts on tourism and gaming revenues. A visitor arrival decline of 95.6% was recorded in February 2020, with average daily visitation falling from 126,600 to just 5,580, comparing February 2019 to February 2020. The lowest was 2,558 visitors in one day (see Figure 1). January and February 2020 visitor arrivals totalled 3,006,859, a drop of 56.9% year-on-year (Macao Statistics and Census Department, 2020a). Casino revenues were US\$3.17 billion and US\$3.23 billion in February and March 2019 (Macao Gaming Inspection Department, 2020) compared to US\$387 million and US\$658 million in February and March 2020 (GGRAsia, 2020e) representing monthly losses of 88% and 80% respectively. Average occupancy rate dropped to 15% (10% for 5-star properties) in February 2020 (Macao Statistics and Census Department, 2020b). Macao was subsequently labelled a 'ghost town' by international media (Keegan, 2020b).

Table 1. Summary of Macao Government key responses to the coronavirus outbreak. January to March 2020.

	Date	Cases of Corona virus in Macao	Government action and policies
First Wave	22 nd January	<i>First case of coronavirus confirmed in Macao.</i>	Face masks reserved for purchase at multiple pharmacies in Macao through presentation of resident or non-resident work ID cards (Macao SAR Government, 2020a). All Chinese New Year celebrations are cancelled in Macao, with temperature checks in place at border crossings and entrances to public buildings and casino (Asia Gaming Brief, 2020a)
	23 rd January		
	25 th January		China stops issuing visas under the individual traveler scheme to Macao. Group tour visas for Chinese to Macao were suspended on 21 st January (GGRAsia, 2020a).
	1 st February		Guests to casinos must wear face masks
	4 th February	<i>Ten coronavirus cases confirmed</i>	Casinos and other entertainment venues operations suspended for 15 days (Macao SAR Government, 2020b) Hong Kong-Macao Ferry terminal operations suspended by the Hong Kong Government (GGRAsia, 2020b)
	11 th February		
	17 th February		
	20 th February		Coronavirus renamed COVID-19 by WHO
	2 nd March		'Personal Health Declaration Certificate' app launched to be renewed after midnight each day (Macao Inc, 2020a) Casinos permitted to reopen with a 30-day grace period given. Two thirds of the casinos reopen (Asia Gaming Brief, 2020a) Macao entertainment venues reopen and include cinemas, gyms, nightclubs, karaoke, bars, massage parlors, spas, and beauty salons (Asia Gaming Brief, 2020a)
	6 th March	<i>No coronavirus cases in Macao</i>	Macao discharges last patient with coronavirus (Leung, 2020)
	9 th March		Macao imposes 14-day quarantine on travellers from Japan, Korea, Italy, Iran, Spain, France (Asia Gaming Brief, 2020a)
	12 th March		WHO declares coronavirus a global pandemic (Asia Gaming Brief, 2020a)
	Second Wave	15 th March	<i>First imported coronavirus case</i>
16 th March			e-card system registration starts permitting residents to spend USD375 at designated outlets (Macao News, 2020a)
17 th March			Macao closes borders to all non-residents with the exception of non-resident workers and those visitors from Taiwan, Hong Kong and China (Asia Gaming Brief, 2020a)
18 th March		<i>15 coronavirus cases confirmed</i>	2 casinos remain closed in Macao. 80% of tables are reopened (Asia Gaming Brief, 2020a).
19 th March			
24 th March			Hong Kong and Taiwan residents must undergo a 14-day quarantine period in one of Macao's designated quarantine hotels. Any residents of Hong Kong, China or Taiwan who have been to another country in the past 14 days are barred from entering Macao (Wong, 2020a)
26 th March		<i>31 coronavirus cases confirmed</i>	Those entering the Guangdong province from Macao or Hong Kong are subject to a self-paid 14-day quarantine, including those from Guangdong returning home (GGRAsia, 2020c)
27 th March			
30 th March		<i>38 coronavirus cases confirmed</i>	12th hotel added to quarantine hotel list, with a total 4,534 room capacity (Lam, 2020)
5 th April		<i>44 coronavirus cases confirmed</i>	
6 th April		The Hong Kong-Zhuhai-Macao bridge, the final public transportation link between Macao and Hong Kong is suspended (Asia Gaming Brief, 2020a)	
8 th April	<i>45 coronavirus cases confirmed</i>	Four of the 12 quarantine hotels are handed back to their respective managements (GGRAsia, 2020d)	
19 th April		3 patients discharged bringing the total to 20, leaving 25 coronavirus cases still in hospital (Macao Government Information Bureau, 2020)	

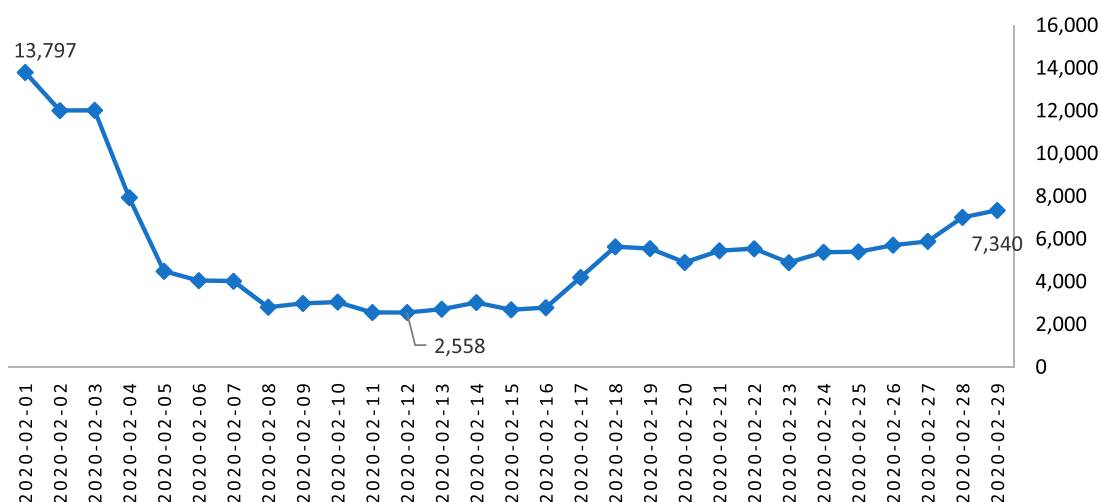


Figure 1. Visitor arrivals to Macao, February 2020 (Macao Statistics and Census Department, 2020a).

The dramatic collapse of both visitation and gaming revenues in the first quarter of 2020 is further evident when comparing to previous years. Within the past decade, Macao's visitation had increased from 24.97 million to 39.41 million annually. Casino revenues had been recovering from the previous high of US\$45.09 billion in 2013, and a revenue drop caused by the Chinese Government corruption crackdown in the years that followed (McCartney, 2015). A city historically with hundreds of thousands of visitors each month and billions in gaming revenues (Table 2), had become largely deserted after the cancellation of Chinese New Year celebrations in January.

The reliance on Chinese gamblers meant there was no alternative economy or any means to mitigate the tourism or gaming industry downturn for Macao as the coronavirus outbreak developed. Some months into lockdown, the city looks to the third wave recovery, and specifically the return of high net worth Chinese gamblers.

The role of government

As the tourism industry matures, it adapts, transforms, and sets its own trajectory by learning from past events. Governments have the capacity to facilitate and influence this transformation by appropriately intervening when required (McLennan et al., 2014). Lo (2009) highlights that Macao has developed into a dominant politico-administrative state, where Macao's economic growth and dependency has been propelled through the proliferation of casinos, with limited diversification efforts elsewhere. This institutional arrangement of limited political dialogue makes Macao efficient at policymaking (Sheng & Tsui, 2009). The Macao Chief Executive (CE), who appoints policy secretaries accountable to him or her, is elected by a 300-person committee of mostly business representatives, and were 12 of the 29 members of the legislative assembly are directly elected, and 7 are appointed by the CE (Sheng & Tsui, 2009).

Macao's public policy initiatives result from a bureaucratic government decision making structure (Wan & Pinheiro, 2014). It is through this 'top-down' approach that the policies and restrictions in the first and second waves could be rapidly implemented. By 4th February, in a measured aimed at controlling the advancing coronavirus cases, the CE decided to suspend casino operations for 15 days as

Table 2. Macao visitation and gross gaming revenues, 2010–2019 (Macao Gaming Inspection Department, 2020; Macao Statistics and Census Department, 2020a).

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Visitation (millions)	24.97	28.00	28.08	29.32	31.53	30.71	30.95	32.61	35.80	39.41
Gaming revenues (US\$ billions)	23.54	33.48	38.02	45.09	43.92	28.86	27.90	33.22	37.86	36.56

well as operations at other leisure venues including cinemas, indoor playgrounds, health centres, gyms, nightclubs and bars (Macao SAR Government, 2020b).

To control coronavirus, governments globally are expanding policy control through measures similar to what Macao has enacted since early February. These include shutting borders, closure of leisure facilities, cancelling events and shows, and quarantine measures. 'If South Korea and Singapore are a guide, medical and electronic privacy are about to be cast aside. It is the most dramatic extension of state power since the second world war' (Economist, 2020). In mid-February, the Macao Government launched the first community wide and visitor e-measure, the 'Personal Health Declaration Certificate' app to be completed, generated and saved as a screenshot on the mobile phone screen each day. The certificate contains personal, travel, and health data (Macao Inc, 2020). It must be used to enter various establishments which have since reopened, such as public buildings, parks, gyms, hotels, and casino floors. As restrictive and oversight policy measures were enacted quickly, there has been limited or no consultation with communities or the private sector, notably the casino industry or small medium enterprises (SMEs). One issue to consider is e-privacy. The government has said it is committed to destroying the declaration forms after the coronavirus outbreak, declaring that the data will be used for the purpose of preventing the occurrence or spread of coronavirus, and as such may disclose the data to 'other Government departments or relevant parties' (Macao Health Bureau, 2020).

A limited collaborative framework between Macao's casino industry and public institutions has been cited previously as a reason for increasing casino reliance (McCartney, 2008). As this paper will allude to, the absence of collaboration post-coronavirus could mean limited changes in Macao's casino tourism trajectory prior to January.

First wave responses

Macao's initial responses to the coronavirus outbreak included the cancellation of key Chinese New Year celebrations and events, many within the Cotai Strip casino properties (Table 1). Chinese New Year is one of two important 'golden weeks' in Macao's calendar, the previous on 1st October 2019 generated almost 800,000 Chinese visitors to Macao in 5 days (Macao Tourism Dataplus, 2020). Wave one included the closure of Macao's casinos. Macao is the world's largest casino city in terms of gaming revenues, generating US\$35.9 billion in 2019 (Macao Gaming Inspection Department, 2020), 5.5 times that of Las Vegas. Notably by the third week of March, the lights were turned out on the Las Vegas Strip, as all casinos, restaurants, bars and clubs were ordered to close for 30 days due to the coronavirus outbreak (Goldstein, 2020).

The Macao lockdown was not solely a bilateral arrangement initiated and implemented between the Macao and Chinese authorities. The Hong Kong Government shut down the Hong Kong to Macao ferry terminal on 4th February stemming the flow of visitors from Hong Kong. Visitors from Hong Kong could still use the Hong Kong-Macao-Zhuhai bridge. On 24th March a 14-day quarantine was imposed by the Macao authorities on those from Hong Kong. From 2nd February until 28th March, the Philippine authorities ordered a ban on those travelling from China, Hong Kong or Macao (CNNPhilippines, 2020). By 17th March, Macao had already closed its borders to all non-residents with the exception of non-residents workers, and those visitors from China, Hong Kong and Taiwan. As coronavirus cases increase globally and at different stages within countries, this dynamic continues of governments barring other nationalities entry, while their own citizens are also banned from other countries.

All the initial virus cases in the first wave in Macao were discharged after treatment by 6th March. A medical team at the hospital treating the cases attributed this to quick detection.

We believe that early diagnosis and adequate supportive treatment may have positive effects on stabilizing the patients. Noticeably, the median duration from Macau arrival to admission was only 3 days, that early detection of imported cases may be contributed to the effective quarantine policy organized by the Macau government, and may minimize the spread of local outbreak in Macau. (Lo et al., 2020:1704)

The first 7 cases of coronavirus in Macao were visitors from Wuhan diagnosed from 22nd to 27th January 2020. Apart from 1 patient, the symptoms appeared a few days into the visit with an average of 3 days taken to detect by the Macao medical authorities (Lo et al., 2020). Coronavirus testing and quick detection are also global concerns.

The ‘Second wave’ – impact of coronavirus imported cases

While Macao had no more coronavirus cases by 6th March, new imported cases forced Macao into a second wave of stringent lockdown measures. By 24th March, Macao imposed a ban on Chinese, Hong Kong, and Taiwanese residents if they had travelled to a foreign country in the previous 14 days. All visitors and residents returning to Macao were now subject to a 14-day quarantine order. Essentially Macao was in complete lockdown. By the end of March, 12 hotels had joined the quarantine hotel provider list with a total room capacity of 4,534 (Lam, 2020). This represented over 10% of Macao’s hotel inventory. The negotiating power of the government was again evident by stating that the Macao hospitality industry should provide hotels as part of corporate social responsibility (Wong, 2020b).

As a certain parts of the world address first wave cases of coronavirus and look to recovery, a consideration is a second wave of imported cases, as has happened in Macao. This may require, as with Macao, even greater border closures between countries or states as measures to contain a possible second outbreak.

The ‘Third wave’ – anticipation and recovery

The third wave considers the measures towards an easing of Macao’s cross-border travel restrictions. The Macao Government announced in early April that it would lift the ban on the IVS once coronavirus stabilized, while also pressing for the casino operators to retain their employees despite the 60% drop in gaming revenues in the first quarter of 2020 (Asia Gaming Brief, 2020a). While 80% of Macao’s casinos reopened in February these have remained staffed with essentially no customers (GGRAsia, 2020f). The ongoing potential of imported coronavirus cases presents a quandary to the Macao authorities. The wave analogy may not function as well as it could, as a ‘third wave’ might also need to work in tandem with ongoing issues of imported cases, with the reopening of regional and international air routes, as well as considering neighbouring cities in China which may experience their own imported and asymptomatic coronavirus cases.

The various health protocols and measures in Macao for the past few months are part of a ‘new normal’ and could permit a cautious phased visitation recovery wave. Residents and visitors in wave one and two have been subject to body temperature checks at multiple entry points to buildings and public areas, the wearing of facemasks, spaces between seating, and daily health e-certificate completion. Public broadcast systems, posters and banners throughout the city remind residents in adhere to the health protocols.

With less imported coronavirus cases in Macao, there has been greater discussion on industry liquidity, ongoing capital expenditure, possible recovery timelines and losses, as well as casino revenue estimations for 2020. Reflecting financial ability, the casino industry concerns also merge around investor confidence, casino company share prices, and cancelled or deferred dividend payments. Even with cost cutting measures enacted during the coronavirus outbreak, one of Macao’s six casino concessions, Melco Resorts, cited US\$2.5million daily operational expenses (GGRAsia, 2020g). Some investors have highlighted that there is only 6 months liquidity left for Macao’s casinos before seeking debt financing (GGRAsia, 2020h).

While some in the Macao casino industry predict mid-2020 for a slow recovery from those Chinese provinces virus-free, this comes with the caveat of visitors being confident in Macao’s health protocols. With guidance first from medical professionals, a suggested tourism recovery could be initiated by summer from Chinese provinces such as Guangdong, one of the wealthiest provinces in China,

and which saw over 11 million Chinese visitors to Macao in 2019 (McCartney, 2020). As China recovers from the coronavirus outbreak and with heavy restrictions on foreign travel to China, some regions in China are reopening to domestic tourism. Over 3,700 national A-rated scenic spots have reopened in mid-March (Morris, 2020). Joint research from the China Tourism Academy and Ctrip, China's leading online travel agency, indicates a high propensity for Chinese to travel domestically from May onwards (China Daily, 2020)

By the beginning of April, the Macao Government began handing back the quarantine hotels as those who had previously entered Macao under the lockdown were discharged after spending 14 days in quarantine. Several coronavirus cases had also been treated and discharged from hospital (see Table 1). With Macao in lockdown, few enter the city. The government had spent US\$6.26 million in this period using private sector hotels for the quarantine programme (GGRAsia, 2020d). While the government ponders a recovery format, the third wave tourism recovery will come with restrictions and caveats aimed at preventing and if necessary, quickly containing any future coronavirus cases to the city. The several health monitoring mechanisms already in place would be at the centre of this recovery.

Lessons on post-coronavirus recovery

The Macao CE highlighted that the government was scrutinizing the corporate social responsibly (CSR) actions of the casinos during the coronavirus outbreak. Although not having a direct relationship to the impending re-tendering of all of Macao's casino licenses in a few years, the CE said increased CSR could be stipulated in the new terms (Wong, 2020b). Such negotiation power from the Macao's Government enabled rapid reaction in waves one and two. The government could continue with a top-down approach to push out policies on wave three, limiting casino sector input. Given there has been limited diversification beyond gaming since casino liberalization in early 2000, using wave three as an opportunity to engage with industry and a more collaborative approach with the private sector can provide greater consensus on a way forward for Macao.

The Macao Government has the fiscal reserves to continue the lockdown. Additional financial support to the Macao community has included the exemption of paying electric and water tariffs between March and May; electric vouchers of US\$375 to each resident to spend at small businesses between May and July, and US\$625 between August and December; and moving the annual wealth sharing scheme to April of US\$1,250 and US\$750 for permanent and non-permanent residents respectively (Asia Gaming Brief, 2020a; Macau Business, 2020). The economic relief packages from the government do not include the integrated resorts.

While this paper tracks documents a three-wave analogy, the impacts will go beyond economics to social issues in Macao. Questions will arise on the impact on the coronavirus outbreak on the thousands working in the tourism and hospitality sector; taking extended leave; standing in empty casino floors and check-in desks; to those working in the quarantine hotels. Several thousand residents and non-resident workers have been quarantined and since released. While Macao waits in lockdown, responding essentially only to returning residents, the issue is the next step to recovery, with possible ongoing concerns on imported cases. The e-certificate, coronavirus case tracking, mask wearing and physical distancing measures are the new normal and will stay in place, thereby permitting a stringent and well-monitored recovery.

The global lockdown has shown signs of environmental improvement, providing an opportunity to do good to the climate. However, this could prove unlikely as governments provide economic stimulus packages in construction and infrastructure post-coronavirus (Economist, 2020b). Similarly, in tourism and hospitality the economic need and stimulus required to recover quickly as in Macao, could greatly outweigh any social or environmental discussions. Rather than a 'rethink' on tourism, the immense economic fallout to Macao's casino industry will mean a focus on Macao's core casino business and Chinese travel markets. Likewise, the city's tourism and destination marketing authorities would resume their *modus operandi* prior to coronavirus.

As this paper is written, global coronavirus cases and related deaths continue to rise as more cities discuss remedies and go into various stages of containment. Observing Macao's policy process to near complete visitor lockdown since January, a three-wave analogy was observed with the following key observations:

- The politico-administrative state with limited public consultation was central in order to enact coronavirus policy measures rapidly;
- Early detection and quarantine of first wave coronavirus cases and a rapid lockdown of tourism and leisure facilities throughout the city assisted in virus containment;
- As the first wave of cases subsided, a second wave of imported coronavirus cases occurred requiring more stringent lockdown measures;
- The Macao Government's significant fiscal reserves have enabled substantial resources to be used during the coronavirus outbreak as well as to maintain the city in lockdown. Macao's hospitality and gaming industry with a level of wealth, continue to deplete existing liquidity. The casino industry is also answerable to investors and banks, and discussions on recovery scenarios are now important.
- Moving to a third wave post-coronavirus recovery should involve a public-private sector collaborative framework rather than maintaining a 'top-down' approach, providing an opportunity to look at tourism diversification;
- Tourism recovery in the immediate term will bring greater focus on Macao's core gambling business and Chinese visitation, particularly on neighbouring key visitor source provinces such as Guangdong.

While state power has been advocated to fight the pandemic globally, the concern is on how it will contract back again afterwards (Economist, 2020a). Macao has already enacted e-measures to collect data daily on residents, non-resident workers and visitors. Macao's geo-political position is unique as a SAR within China and reliant almost entirely on Chinese visitation and gambling revenues. Travel ban policies needed to curtail coronavirus outbreaks would need to be slowly removed by the Chinese and Macao Governments to restart the tourism economy – conscious of not wishing to restart the clock on a resurgence of coronavirus cases, but also recognizing the escalating economic impacts on the private sector from casinos to SMEs, and possible social impacts on the Macao community by a prolonged lockdown.

Note

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