

Accounting for gaming in the time of plague: COVID-19 in Macau

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Abstract

Purpose – While the COVID-19 virus has been spreading worldwide, some studies have related the pandemic with various aspects of accounting and therefore emphasized the importance of accounting research in understanding the impact of COVID-19 on society as a whole. Recent studies have looked into such an impact on various industries such as retail and agriculture. The current study aims at applying a sociological framework, sociology of worth (SOW), to the gaming industry in Macau, the largest operator of state-allowed gambling and entertainment in China, which will allow for its development during the COVID-19 pandemic to be charted.

Design/methodology/approach – The study uses the theory of SOW as a framework and collects data from various sources, such as the government, gaming operators and the public, to create timelines and SOW frameworks to analyze the impact of the virus on the gaming industry and the society as a whole.

Findings – Detailed content analysis and the creation of different SOW matrices determined that the notion of a “lonely economy” during a time of a critical event may be ameliorated in the long term through compromises of the different worlds and actors of the SOW.

Practical implications – Though largely theory-based, this study offers a thorough account of the COVID-19 incident for both the government and the gaming industry to reflect on and to consider new ways to fight against degrowth caused by disasters or crises.

Social implications – The SOW framework divides society into different worlds of different worths. The current study shows how the worths of the different worlds are congruent during normal periods, and how cracks appear between them when a sudden crisis, such as COVID-19, occurs. The article serves as a social account of how these cracks are formed and how could they be resolved through compromise and reconstruction.

Originality/value – This study is a first attempt to apply SOW to a controversial industry (gaming) while the effects of the COVID-19 pandemic are ongoing. It offers a significant contribution to the social accounting literature through its consideration of the combination of unprecedented factors in a well-timed study that pays close attention to analyses and theoretical elaboration.

Keywords Covid-19, Sociology of worth, Common good, Gaming industry, Macau

Paper type Research paper

1. Introduction

This study examines the COVID-19 pandemic and its effect on society and accounting as a whole. Discussions on this issue have only begun to recently emerge through the scientific discourse of zoonosis. [Schaltegger \(2020a\)](#) emphasized that by learning the origins of



epidemics such as the current virus, it is possible to improve the sustainability of industrial and business development. In particular, he stated that the three paths of the discovery of an epidemic such as COVID-19 are through:

- (1) fetching the viruses;
- (2) going to the viruses; and
- (3) creating the viral epidemics by human beings (Schaltegger, 2020b).

Past experience demonstrates that the emergence of contagious disease has long been a vicious cycle that results in dreadful consequences for humans.

Evans (2018) even vividly demonstrated that the production of animal agency which hastens zoonosis is ultimately created by human behaviors, making them the *locus* of disease. Using an account of the plague in colonial India (1896–1910), he showed how human hierarchies, rat agencies, science and bureaucracy should be accounted for in understanding the development of zoonoses.

Out of zoonosis, in the agricultural realm, Tingey-Holyoak and Pisaniello (2020) demonstrated how COVID-19 has affected planning and forecasting in the primary produce industry. Data-integrated scenarios related to the pandemic, climate and water and other critical issues ought to be accounted for to secure the sustainable growth of the industry. Nevertheless, as Schaltegger (2020a) underlined, the COVID-19 pandemic can be seen as an involuntary degrowth experiment and this degrowth, no matter if it is related to agriculture or zoonosis or even the gaming industry – the key focus of this study is largely human created [hierarchies, agencies, science and bureaucracy as mentioned by Evans (2018)].

By borrowing a critical theoretical lens, zoonoses and related crises are thus viewed as a human creation of evaluations of worths from a sociological perspective. The deployment of the sociology of worth (SOW) (Boltanski and Thévenot [1991] 2006) in this study offers significant insight into understanding how zoonosis (which later evolves into a global disaster or prompts a revisit to human behavioral understanding) works in a unique entity, such as Macau, which relies on a “lonely economy”: the gaming industry [although Schaltegger (2020a) has touched on areas such as retail and tourism, he did not go directly into gaming]. The combination of the above elements has made this study unique in the social accounting literature.

This study contributes to the social accounting literature across three key points. First, the application of theoretical insights from other disciplines, be it sociology, history or psychology in social and environmental accounting research, is an attempt to reconstruct the social reality (Berger and Luckmann, 1966) through multiple perspectives. The authors of this important treatise have discussed how facets of the social reality and one of the most applicable elements here in the current research are the “social objects of worlds” which are created by “institutionalization.” Accounting research cannot only remain in a social void; our application of “Sociology of Worth (SOW)” (Boltanski and Thévenot [1991] 2006) is exactly an attempt to extend accounting research to help people look into the real “social objects of the worlds.” Thus, more accounting research based on theoretically sound foundations is encouraged and the authors hope that this exercise may pave the way for future endeavors.

Second, the current research has attempted to bring together two unprecedented events or “social happenings.” The first is, of course, the COVID-19 virus which has affected and is still affecting many aspects of humanity. The second is an unprecedented situation of how a world-renowned gaming city, Macau, could turn into a “lonely” and even a “dead” economy. Readers of this article can witness the transformation of going from riches-to-rags by following our chronological analyses of the lonely economy. Indications of economic performance and even happiness are not only found in financial returns and growth. The

social reality must be approached from other vantages. Of course, we are not wholly pessimistic, but the process serves as an important, though painful, learning opportunity for the people, the government and related authorities as well as the gaming industry operators in Macau and beyond.

Finally, this study also contributes to the fields of CSR, disaster and crisis management and institutional theory through advocating the concept of a “lonely” economy and how the people, gaming operators and government have reacted to the devastation caused by COVID-19. We also offer alternative explanations on “the ways how we do things” (Berger and Luckmann, 1966) and “how we learn from knowledge and experiences.”

2. Literature review

In this section, we will present a literature review of the gaming industry, on which Macau is heavily reliant, and its controversial nature. The historically dominant position of the gaming industry has gradually turned Macau into a lonely economy. A consequence of this is the multiplied socioeconomic effect by COVID-19 on the gaming industry sector, the industry’s stakeholders, and the economy as a whole. Furthermore, the controversial nature of the gaming industry has triggered a response to the situation during the pandemic from the industry’s stakeholders and society more broadly in the sense that the gaming operators are expected to go to extra lengths to legitimize their “controversial” operations in such a difficult time. We review the theoretical foundation of the SOW (Boltanski and Thévenot [1991] 2006), as well as the “worlds” which we will be using in our analysis to develop our SOW frameworks. We then work through these frameworks to explore the social responses to the COVID-19 pandemic environment in the context of the Macau gaming industry.

2.1 *Controversial nature of the gaming industry*

There has been a significant number of discussions on the issue of controversial or contentious industries in social accounting literature. In particular, contentious industries have been defined as those which are linked to products or services which may elicit offence when publicly presented (Wilson and West, 1981) because they are characterized by social taboos, moral debates and political pressures (Cai *et al.*, 2012). Davidson (2003) has made an extensive study on five types of controversial products: tobacco, alcoholic beverages, firearms, gambling and pornography. His selection of these five industries is based on certain commonalities across their products such as legitimacy (congruence between the marketing of these products and the values of the society), legal problems (such as litigation related to tobacco companies and strict government control on casinos), rites of passage (the role they may play in the transition from adolescence to adulthood) and paranoia (the views of advocacy groups about their immorality) (Davidson, 2003, pp. 2–5). His studies have offered in-depth analysis of the marketing challenges, product line management, promotion strategies and even pricing and distribution of such industries’ products.

This paper is particularly interested in the public affairs strategy of the gaming industry. Previous studies in gambling have already extensively researched the social and economic consequences of the gaming industry, so there is no need to repeat them here [Walker and Sobel (2016) offer a broad overview]. We will only discuss briefly, from the institutional perspective, the gaming industry’s legitimacy in relation to the theory of SOW, which will be explained in the following sections.

This paper echoes classical legitimacy strategies as proposed by Lindblom (1993) and Suchman (1995). Davidson (2003, p. 239) cited Oliver (1991) to present a systematic typology of how such controversial industries typically gain legitimacy and thus continue to supply their so-called socially unacceptable products. This typology defines responses to social pressures as strategies that:

- manipulate social responses (control, influence and co-opt the response of their stakeholders);
- defy negative responses (attack, challenge and dismiss those responses);
- avoid undesirable responses (escape, buffer and conceal those responses);
- compromise with challenges to their legitimacy (bargain, pacify and balance between their existence and the challenges from their stakeholders); or
- acquiesce to those negative social responses (comply, imitate and implement habitual measures that allow them to gain legitimacy for their continued existence).

Out of the controversial industries as analyzed by Davidson (2003), the gaming industry is probably the one which can most easily maintain or regain its legitimacy through compromise and acquiesce. As will be discussed, compromise is likely the most important element in the SOW to maintain overall social balance. For example, the tobacco industry and the alcoholic beverage industry can only supply “less harmful” products such as “light” cigarettes and control purchases based on age limits or are limited to only sponsorship of sporting events in some countries (Noronha *et al.*, 2016). However, it is very difficult for the pornography industry to conduct similar activities. Sex tourism has been studied extensively (see for example, Carr, 2016) but it can only remain as a social vice and a practice rife with human exploitation. By contrast, the gambling industry can diversify successfully from pure hard-core gambling into leisure, hospitality and tourism. Gaming is often bundled with vice issues (such as sex work), or even illegal activities (such as money laundering) as well as socially acceptable and constructive activities such as tourism and hospitality and even family entertainment (kid-friendly casino resorts). Especially given the strict government control, the gaming industry in Macau has no need to use strategies such as “defy” or “avoid.” Rather, “compromise” and “acquiesce” are strategies to maintain and harmonize the “worths” of the different “worlds” (as will be explained below). Nevertheless, gaming operators still need to work on gaining or maintaining legitimacy (especially for the critical purpose of license renewal) and therefore conduct various CSR activities. Much of this study’s conclusion stresses that a critical disaster such as the COVID-19 pandemic has reminded everyone that the gaming industry needs to move beyond the mere window-dressing paradigm of CSR.

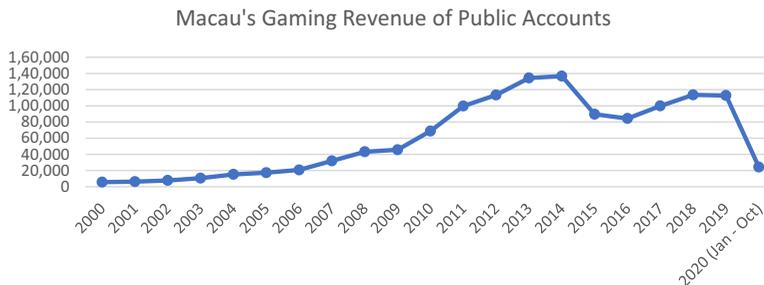
2.2 Macau’s reliance on the gaming industry: the shaping of common good and “worths” in a “lonely” economy

Macau, a Special Administrative Region of the People’s Republic of China – the second largest economy in the world as measured by the country’s gross domestic product (International Monetary Fund, 2020), is a city in the Western Pearl River Delta by the South China Sea. Before and into the early period of colonial administration under Portugal in the 19th century, Macau was a fishing village and a trading port between China and the Western countries. However, after Hong Kong – the neighboring city of Macau – was ceded to Britain by China’s Qing government in 1842, Macau’s overseas trading position was rapidly eclipsed by Hong Kong. At that point in time, the Macau government found the existing gambling stalls in the city were becoming popular and generated increasing volumes of business, which meant they became a more significant aspect of Macau’s economic activities. The government thus made the move to legalize the gaming business in 1847. In 1930, the government granted the first casino gaming concession, which marked the beginning of the era of casino monopoly in Macau. After Macau was returned to Chinese sovereignty in 1999, the Macau government officially began the procedure of gaming

industry liberalization through an international tender. The monopoly eventually ended with new casino concession agreements made in 2002 (Macau Gaming Inspection and Coordination Bureau, 2020).

Since the legalization of the gaming industry in Macau, gaming operators have been the major contributors to Macau's public account (government income) through the tax paid for their gaming revenue [1]. Following the introduction of Las-Vegas style mega casino-hotel resorts to Macau during the mid-2000s, Macau's gaming revenue and its contribution to Macau's government income experienced dramatic growth until the outbreak of COVID-19 in 2020, which caused a sharp decrease in the number of casino patrons and a significant drop in gaming revenue (see Figure 1). Consequently, the Macau government has to expect a budget deficit beyond 2020 (Macau Business, 2020), which implies that the government could only use historical fiscal reserves to support public services and must reduce non-essential expenditures. Further to their contributions to the Macau government and wider society in monetary form through gaming revenue taxation, casino operators have increased the portion of the Macau labor force in their employment from 10% in 2004 to 22% in 2019 [2]. Thus, the livelihood of over one-fifth of Macau's working population relies on the gaming industry. The contraction of the gaming business in Macau during the COVID-19 pandemic has had an unprecedented effect on Macau's socioeconomic condition as the city has been benefiting from the economic boom brought by the dominant driving force of the gaming industry over the past two decades.

Because of the unique situation of Macau, especially the dominant position of and almost sole reliance on the gaming industry, a challenging but interesting setting has been provided for us to rethink the meaning of the common good. Based on ancient Aristotelian philosophy, the common good is what is regarded as beneficial to most members of a society. Boltanski and Thévenot ([1991] 2006, p. 74) stated that as a first axiom, members of a polity share a common humanity. This axiom in turn develops the principle of differentiation, common dignity, the order of worths and the investment formula, until the common good is formed (Boltanski and Thévenot [1991] 2006, p. 77). Perkiss and Moerman (2020) have also explained the concept and stated that there are as many common goods as there are human projects and thus the concept is consistent with a pluralistic society. They have cited Lehman (2007) who articulated that common goods are understood to be shared social goods such as infrastructure and the like. The common good has also been studied in the accounting literature (see, for example, Osborne and Ball, 2010). Topics include social audit, public accounting management as well as CSR and sustainability.



Note: *1 Pataca is approximately equivalent to 0.125 US Dollar

Source: Macau Statistics and Census Service

Figure 1. Macau's gaming revenue of public accounts (i.e. Macau government's tax revenue from gaming industry) (amounts in million Patacas^a)

In this study, we are eager to discuss the source of such shared social goods and thus how the accountability of the source can be assessed. There are economies which depend on only a single resource, such as South Sudan which is solely dependent on oil (Haas, 2016). In that case, the economy becomes characterized as high risk and is vulnerable to external economic factors. Haas (2016) also pointed out that there are cases of countries which have successfully diversified their economies, such as Botswana diversifying from oil to diamond mining. However, to do so requires strong and well-run institutions. Perkiss and Moerman (2020) mentioned the morality, justice and legitimacy issues of the common good. If the source of the common good essentially comes from the distinct revenue of the gaming industry in Macau, the plurality of the needs of all people has to be satisfied by that same, single source. Therefore, matters of morality (responsible gaming behavior) (see for example, Hing, 2001; Leung and Snell, 2017) and legitimacy (CSR of the gaming industry) (see for example, Hancock *et al.*, 2008; Dowling and Pfeffer, 1975) come into play. These elements have all derived from the practices of the industry that have developed across an extensive period in Macau. The industry has modernized after the liberalization in 2002 when foreign, especially North American, capital was introduced. Even though the gambling business has been transformed into a so-called gaming and leisure industry incorporating other operations such as tourism and hospitality, the core, the “source” of the common good in Macau, derives from the gaming industry. We call this a “lonely” economy [3].

When pluralistic needs are satisfied by the same and sole source, gaming revenue becomes the single common good of the people in Macau, as well as related stakeholders and investors. The people, therefore, will be pacified when their perception of the common good continues to exist. The general public may even believe that the wealth of the gaming operators should be shared with them (thus the government actions of wealth-partaking schemes (cash-giving) and some lawmakers’ suggestions that Macau residents should even own shares in casinos). When such a common good subsides because of economic factors, or even disappears because of a natural disaster or critical incident (as in the case of COVID-19 affecting the industry), the shared values of the people cannot be united and “cracks” among people’s needs and “worths” will appear. To survive, the government must either seek strategies to continue to supply another common good for the people, or attempt to restore the source. In this process, the gaming operators play an essential role.

A theoretical framework which encompasses the worths of different stakeholders is therefore necessary. Once such a framework has been established, it is possible to compare the worths of different individuals and actors through this theoretical lens and examine how the source (the gaming industry) reacts to people’s worths once “cracks” appear because of critical events. Borrowing from the experience of Perkiss and Moerman (2020) who used the theory of SOW (Boltanski and Thévenot ([1991] 2006) to frame their study on accountability issues within the hurricane Katrina disaster, this paper attempts to use a similar theoretical perspective to understand how the source, that is the gaming industry and thus Macau’s revenue generator, reacts when a natural crisis such as COVID-19 happens. Furthermore, we will look into the people’s and the government’s reactions, because they are all the main actors within the SOW framework.

Taking into account the evolving paradigm on common good before, during and after a disaster or a critical event such as COVID-19, and adopting the SOW framework to analyze the Macau gaming industry throughout two periods – pre-COVID-19 and COVID-19 – our analysis will be unpacked in the sections that follow. With this new application of the SOW framework in the context of a specific industry, we aim to establish a concise and generalizable SOW framework that can be extended to further studies in other industry sectors and regional contexts to capture the changes in the stakeholders’ reactions and their

expectations of governments' or corporations' response measures after a critical event. This is especially relevant as the current COVID-19 stage is still in place, but the need for more post-COVID-19 studies will be urgent as different regions in the world begin to emerge from the depths of the COVID-19 crisis and restore their own social and economic orders.

3. Sociology of worth – a brief introduction

French sociologists and philosophers' thoughts have heavily influenced accounting research (Gibassier *et al.*, 2018; Hoque, 2018). Foucault, Bourdieu and Latour and Callon's works are typical examples of forces shaping the body of accounting literature related to the order of things, actor-network theory and critical accounting. The recent translation into English of the seminal work by Boltanski and Thévenot (*On Justification: Economies of Worth*) has led the theory of SOW to become a theoretical focus for many accounting researchers. Anisette and Richardson (2011) were the main actors who introduced SOW into accounting research. Their paper elucidated their central ideas and then used those premises to reinterpret a study conducted by Ansari and Euske (1987) on uniform cost accounting systems. Perkiss and Moerman (2020) also applied SOW to study the issue of accountability (justice and fairness) before and after a crisis (hurricane Katrina in New Orleans in 2005). These abovementioned authors have both deconstructed and applied SOW in different accounting research settings. Rather than repeating their work here, only a brief summation of SOW will be provided before an exploratory application of the theory to the responsiveness and accountability of the gaming industry in Macau during the COVID-19 pandemic.

According to SOW, the worths of "beings" to produce situated judgments can be categorized into six worlds, each based on one canonical work. The six worlds are the civic world (Rousseau's *Social Contract*), the industrial world (Saint-Simon's *L'industrie*), the domestic world (Bossuet's *Politics*), the market world (Adam Smith's *Wealth of Nations*), the inspired world (St. Augustine's *City of God*) and the world of fame (Hobbes' *Leviathan*).

Boltanski and Thévenot ([1991] 2006, pp. 140–144) further established a framework for analyzing the worlds which include the higher common principle, state of worthiness, human dignity, list of subjects, list of objects and arrangements, investment formula, relation of worth, natural relation among beings, harmonious figures of the natural order, model tests, mode of expression of judgment, form of evidence and state of deficiency and decline of the polity.

Taking into consideration this framework and the six canonical worlds (sometimes also called commonwealths or polities), SOW demonstrates a comprehensive methodology to facilitate a deep investigation into how people and organizations justify and make decisions. Given the massive coverage of SOW, it is not feasible in this paper to analyze all the elements but we shall focus on five worlds (fame, the industrial, market, domestic and civic) and several key framework elements such as the higher common principle, object and evidence, test and sacrifice. We will consider the application of SOW in terms of both the people and the government (the actors) and the gaming industry (the source) in relation to the COVID-19 crisis.

4. The sociology of worth framework as applied in brief

As mentioned above, we will focus on a number of worlds from the perspectives of the people (P), the government (G) and the gaming operators (O) and try to explain these worlds through the key tenets of SOW.

A brief explanation of the analytical elements is warranted here wherein descriptions are drawn primarily from Boltanski and Thévenot ([1991] 2006, pp. 140–144). First, the higher

common principle refers to the characteristics of a polity, as a convention for establishing equivalences among beings. Investment formula represents a key condition of a polity's equilibrium. Tests come about in a cohesive whole to determine the certainty of an outcome. Forms of evidence comprise the form in which evidence is presented in the modality of knowledge appropriate for the worlds. Sacrifices (deficiency of the state) are the conditions to maintain the equilibrium of the worlds to balance the SOW. There are, of course, many other elements in the comprehensive SOW framework but we shall focus on those as mentioned above.

This paper's primary goal is to conduct a chronological study before and during the COVID-19 crisis in relation to the people (P), the government (G) and the gaming operators (O) in Macau. In the following section, we will first postulate a SOW framework for the P, G and O in the pre-COVID-19 situation. Then, through content analysis, we shall present the COVID-19 SOW. Finally, assuming that the virus has largely subsided [at least currently (mid-October, 2020) in the Guangdong area of China at the date of writing this piece], we will try to present a hypothetical post-COVID-19 SOW framework [4]. The following pre-COVID-19 SOW framework is mainly based on available sources and the information as presented in the beginning of this paper.

5. Sociology of worth framework pre-COVID-19

With the chosen worlds and the appropriate elements of analysis, we present here a SOW matrix describing the pre-COVID-19 setting with reference to the people (P), the government (G) and the gaming operators (O) (Table 1).

6. Methodology of the study

The following sections will briefly explain the content analysis method used in this study while simultaneously providing some findings.

6.1 Content analysis

Neumann (2013) indicated that content analysis is a tool for the combination and synthesis of the meaning of communication. The various elements to be analyzed may include words, photos, significations, attributes and themes that are connected. Holsti (1969) provided another perspective on content analysis when he pointed out that it is "any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (p. 14). He also points out that "only the manifest attributes of text may be coded [. . .] [from which] inferences about latent meanings of messages are permitted" (p. 598). That means content analysis seeks to analyze messages through some signals and information. This research method has been widely used in social accounting research (Osman *et al.*, 2020; Semeen and Islam, 2020).

To understand the reaction of the gaming operators (O) on the people (P) and the actions taken by the government (G), we have collected qualitative data from various sources ranging from press releases (G), corporate publicity and reports (O) and articles from the mass media (P, G, O). This information covers the period from the first formal announcement of the origin of COVID-19 in Wuhan, China (early 2020), until the waning presence of the virus in the Guangdong province, and the re-opening of the China–Macau boarder gate for tourists and patrons of the gaming industry. Information about the content analysis is presented in the following section. From the analysis, we begin to investigate how the G, O and P have responded or reacted to the pandemic.

	Fame	Domestic	Industrial	Market	Civic
Higher common principle	World's leading city for tourism and leisure (P, G, O) Gaming revenue superseding Las Vegas (O)	Societal members' stability (P); social, economic and political	Revenue from gaming, tourism and hospitality (P, G, O)	Revenue, world GDP ranking (P, G, O)	Family stability and wealth (P)
Investment formula	Opening-up of the gaming monopoly (G) Concentration on Macau investment (O)	Remain in line with government directives (P, O)	Maximize efficiency through introducing more import labor (G, O)	Attracting more foreign capital, tax policy (G, O)	Remain in line with government directives (P, G)
Test	Social stability and wealth (P, G, O)	Employment rate and suicidal rate, (P, G)	Population growth, crowdedness (P, G, O)	Number of casino concession licenses (G, O)	social stability and welfare (P, G)
Evidence	Cash-sharing (G) Full employment (P) A relatively low level of CSR (O) "Lonely" economy (P, G, O)	Limited CSR for the vulnerable members of society (O) "Lonely" economy, "over-tourism" (P, G)	Legal restrictions on import labor for casinos and local residents (P, G, O)	Increase in casinos, junkets and money laundering (P, G, O)	Annual increases in social benefits (P, G)
Sacrifice			"Lonely" economy (P, G, O)	Financial crimes, irresponsible gambling (P, G, O)	Development of government dependence (P, G, O), government over-spending (G, P)

Table 1. SOW concerning the people (P), the government (G) and the gaming operators (O) pre-COVID-19

6.2 Data collection and coding

Based on the SOW framework, we studied the above-mentioned qualitative data to discern the pattern and salience of the reactions of the target stakeholder groups to the changing conditions imposed by COVID-19. The relevant information was found online, published between February 4, 2020 and July 31, 2020, and was analyzed. The criteria for selection of an article were based on the keywords indicated in Table 3. At any time, if one of the keywords was in a headline or body of the content, the article was analyzed using the SOW framework.

In terms of the designated target groups, policy documents, action plans announced during official press conferences and press releases from the government's website are regarded as the government's reaction (G), while the behaviors of local associations are considered the reactions of the people (P). For gaming operators (O), information from mass media, corporate publicity and reports were collected for analysis. Table 2 shows the distribution of qualitative data by sources.

After thoroughly searching for and reading the articles and information disclosed online, a master list of specific themes was devised to be used for categorizing the issues. The master list consists of 13 key issues. Each article or piece of information was then re-read and coded into one of the 13 issues. Where some articles dealt with more than one issue, only the overriding theme of that article was coded. As a result, each article could only be coded once. After the coding was complete, the issues were grouped into eight general categories for conceptual simplicity (see Table 3).

7. Analysis: COVID-19 roadmap

The collected information was further summarized and analyzed according to the main issues extracted. Figures 2–4 show the reaction roadmap of the government (G), people (P) and gaming operators (O) during COVID-19. In terms of the timeline, February to March is the key period to fight against the epidemic. During this period, the government mainly focused on building a complete mechanism to reduce and ultimately eliminate the incidence of COVID-19 infections in the city. At the same time, the government called on all sectors of the community to cooperate fully to stop the spread of COVID-19 in Macau within the shortest timeframe possible (refer to Higher Common Principle in Figure 2). All sectors of

Sources	Types of media	Pertaining to gaming concessionaires	Pertaining to associations
From the government	Policy documents	1	–
	Action plans	2	1
	Press releases	7	4
From the mass media	Macau local newspapers	97	7
	Mainland newspapers	9	13
	Casino newsletters	46	0
	Other newspapers	23	3
From the concessionaires	Website/press releases	6	23
	Social media	15	7
	Official documents/reports	10	0
From the associations	Website/press release	16	Not relevant
	Social media	21	Not relevant
Total		253	58

Table 2.
Sources of qualitative data

Table 3.
List of keywords and main issues

Keywords	Categories grouped
Donation, subsidy	Monetary donations
Masks, supply kits, temperature guns, sanitizer, anti-epidemic supplies, medical gloves, shower caps, disinfection and hygiene supplies	Medical supplies
Quarantine hotels, hotels for medical observation, hotels for special isolation	Quarantine hotels
Leave schemes, job opportunities, training and development, salary cut, no pay, bonus	Job security
Special subsidy, support for non-local employees, virtual training programs, anti-epidemic arrangements, low/zero-interest loans	Employee support
Purchase from local SMEs, SME anti-epidemic support	Local SMEs and other business support
The elderly, associations, nursing homes, volunteers	Local society protection and support
Government's call, government claims, government's will, Chief Executive said	Government's actions

the community immediately responded to the call of the government to avoid outdoor activities and to take proactive protective measures. However, the strict epidemic prevention mechanism and its deployment sacrificed Macau's main source of revenue from the gaming and tourism industry (refer to Sacrifice in Figure 3). To appease people and ensure social stability, the government claimed that Macau had sufficient financial reserves to ride out any difficulty wrought by the COVID-19 outbreak, including the possible deficit that might emerge in the government account for the current fiscal year. It also gave the assurance that Macau had sufficient supplies of fresh produce, food and basic goods (refer to Investment Formula in Figure 2). The government also announced a series of incentives and activities to subsidize local residents and to stimulate the economy (refer to Evidence in Figure 4). The government was confident that the local economy would achieve a robust upturn once the disease outbreak was under control. At this critical juncture (February–March, 2020), the government, enterprises and public strengthened co-operation and made concerted efforts to overcome difficulties. Large companies and enterprises, including gaming operators, supported and cooperated with the government's various measures in response to the epidemic, flexibly allocated resources and shouldered their social responsibilities (refer to Evidence in Figure 4). This is the embodiment of the spirit of sharing weal and woe as all sectors are understood to be in the same boat.

The effect of the epidemic can be seen in statistics for June 2020 which showed gross gaming revenue was 716 million Patacas, a decrease of 97% compared to the same period of the previous year [5]. In February 2020, with the urgent need to curtail the spread of COVID-19 infections in the city, gaming operators complied with an order of the government to suspend casino operations for 15 days, giving employees paid leave across this time. Even after operations resumed, there were more employees in the casinos than patrons. It is important to point out that although gaming companies are operators under the gaming system in Macau, they are the beneficiaries of the state's exclusive gambling policy as overseen by the Macau government, and they have the obligation to obey government constraints. For this reason, they cannot be considered as doing business in a complete market economy. However, Macau is a free market economic environment. In accordance with the spirit of the contract, the government and gaming companies have a clear relationship of responsibilities and powers. Although faced with the significant decline in operating income, gaming companies followed the government's call to engage in mutual

Figure 2.
Action roadmap of the government, people and operators (1)

	Feb	Mar	Apr	May	June	July
Epidemic situation	By February 1, accumulated number of infection cases: 14,380 in mainland China, 14 in Hong Kong, 7 in Macau.	By March 1, accumulated number of infection cases: 32,652 in mainland China, 98 in Hong Kong, 10 in Macau.	By April 1, accumulated number of infection cases: 81,589 in mainland China, 765 in Hong Kong, 41 in Macau.	By May 1, accumulated number of infection cases: 82,875 in mainland China, 1,039 in Hong Kong, 45 in Macau.	By June 1, accumulated number of infection cases: 83,022 in mainland China, 1,087 in Hong Kong, 45 in Macau.	By July 1, accumulated number of infection cases: 83,537 in mainland China, 1,233 in Hong Kong, 46 in Macau.
Higher common principle	The Chief Executive called on all members of the community to continue – alongside the Government – the work to overcome adversities linked to the COVID-19 episode, and so help to restore the city to normality (G)					
Investment formula	Members of the public to remain at home and to avoid unnecessary outings. (P, G, O); The government was confident that the local economy would have a robust upturn once the disease outbreak has been controlled (G)			Ongoing work to fight the pandemic – and thus to maintain community stability and to boost conditions for the post-pandemic economic recovery (G)		
	The government claimed that Macau had sufficient financial reserve to ride out any difficulty wrought by the COVID-19 outbreak, including the possible deficit that might emerge in the government's accounts for the current fiscal year. (G)			The government will create a 10-billion-Pataca fund – under the Macao Foundation – to enhance the financial support offered to Macau residents and businesses affected by the COVID-19 pandemic (G); The adjustment in the amount of gross gaming revenue generated by Macau's casino sector amid the COVID-19 pandemic was within the government's expectation (G)		
	The Chief Executive gave the assurance that Macau had sufficient supplies of fresh produce, other food, and other basic goods. (G)			Distribute consumption subsidy to residents for stimulating local spending (G); Large discounts and promotions by hotels and retailers in local resorts (O)		
	Laid off non-resident staff (G, O)					
	The government called on the gaming operators to shoulder further social responsibilities and make appropriate arrangements with employees for the suspension period (G, O).					
	The government engaged in all-out effort in order to ensure supply of face masks to the Macau public (G)					

Source: Various. Refer to Table 2

	Feb	Mar	Apr	May	June	July
Test		Consumption subsidy plan promulgated (G)	The government launched tourism activities for Macau residents, such as local tours and tours to Hengqin and neighboring areas, and organized more festive events. (G)		In the second quarter, Macau's consumer confidence index was 71.42, downed by 7.26 points from the previous quarter and 18.23 points from the same period last year. (G, P)	
			For April - June, unemployment rate was 2.5%, increased by 0.1% comparing to that of March-May (G, P)			
Sacrifice	Non-resident workers were suspected to have been dismissed unfairly (O)	Called for medical observation hotels (G)	Board members gave up their directors' emoluments, management levels participated in unpaid leave schemes, and many employees participated in special family care flexible leave schemes (O)			
	Arrivals in Macau dropped by approximately 80% during the Spring Festival (P, G, O)	Gross gaming revenue represented a year-on-year decline of 79.7%(O)	GDP of Q1 declined by almost 50% comparing to that of last year (G, P, O)	GDP of Q2 declined by 67.8% comparing to that of last year; Revenue of gaming and tourism sectors dropped by 97.7% & 93.9% in Q2 2020 comparing to that of 2019 (G, P, O)	Businesses dropped continuously in gaming and tourism industries (G, O, P)	
	Casino operations suspension from Feb 4 to Feb 20 (G, O); The government called the local business sector to suspend commercial activities where possible (G, O, P)					
	The government urged members of the public to remain at home and to avoid unnecessary outings (G, P)					
	Most public services were suspended in February and resumed normal functions by mid-March; Services of community, day care and sponsored childcare continued to be suspended (G, P)					
	All entertainment and public activities scheduled remained temporarily closed (P)					
	Primary, secondary and higher education sectors continued to be suspended during February and March; classes resumed in stages in April and early May (P)					

Source: Various. Refer to Table 2

Figure 3. Action roadmap of the government, people and operators (2)

Figure 4.
Action roadmap of
the government,
people and
operators (3)

	Feb	Mar	Apr	May	June	July
Evidence	Employers agreed to protect labor rights and interests of their workers according to the law and coordinate with their workers about work arrangements during the closure period. (O)	Employers agreed to protect labor rights and interests of their workers according to the law and coordinate with their workers about work arrangements during the closure period. (O)	Employers agreed to protect labor rights and interests of their workers according to the law and coordinate with their workers about work arrangements during the closure period. (O)	Employers agreed to protect labor rights and interests of their workers according to the law and coordinate with their workers about work arrangements during the closure period. (O)	Employers agreed to protect labor rights and interests of their workers according to the law and coordinate with their workers about work arrangements during the closure period. (O)	Employers agreed to protect labor rights and interests of their workers according to the law and coordinate with their workers about work arrangements during the closure period. (O)
	Donations to assist the mainland and local community in the rescue and the prevention and control of the outbreak. (P, G, O)	Donated face mask and other medical supplies to local community and frontline medical staff (O, P)	Donated face mask and other medical supplies to local community and frontline medical staff (O, P)	Donated face mask and other medical supplies to local community and frontline medical staff (O, P)	Donated face mask and other medical supplies to local community and frontline medical staff (O, P)	Donated face mask and other medical supplies to local community and frontline medical staff (O, P)
	The government has announced a five-pronged approach in order to ease the economic pressure faced by residents and local businesses (G)	The government had committed itself to spending over 50 billion Patacas in response to the COVID-19 pandemic (G)	The government had committed itself to spending over 50 billion Patacas in response to the COVID-19 pandemic (G)	The government had committed itself to spending over 50 billion Patacas in response to the COVID-19 pandemic (G)	The government had committed itself to spending over 50 billion Patacas in response to the COVID-19 pandemic (G)	The government had committed itself to spending over 50 billion Patacas in response to the COVID-19 pandemic (G)
	Government assisted homecoming Macau residents in mainland China and overseas countries (G); Provide funding to support for the poor (G, P, O); Purchase from local SMEs to support their operations (G, P, O)	Government assisted homecoming Macau residents in mainland China and overseas countries (G); Provide funding to support for the poor (G, P, O); Purchase from local SMEs to support their operations (G, P, O)	Government assisted homecoming Macau residents in mainland China and overseas countries (G); Provide funding to support for the poor (G, P, O); Purchase from local SMEs to support their operations (G, P, O)	Government assisted homecoming Macau residents in mainland China and overseas countries (G); Provide funding to support for the poor (G, P, O); Purchase from local SMEs to support their operations (G, P, O)	Government assisted homecoming Macau residents in mainland China and overseas countries (G); Provide funding to support for the poor (G, P, O); Purchase from local SMEs to support their operations (G, P, O)	Government assisted homecoming Macau residents in mainland China and overseas countries (G); Provide funding to support for the poor (G, P, O); Purchase from local SMEs to support their operations (G, P, O)
	Called on online working and learning (G, O)	Called on online working and learning (G, O)	Called on online working and learning (G, O)	Called on online working and learning (G, O)	Called on online working and learning (G, O)	Called on online working and learning (G, O)
		The government supported the development of cultural and creative industries by various measures (G)	The government supported the development of cultural and creative industries by various measures (G)	The government supported the development of cultural and creative industries by various measures (G)	The government supported the development of cultural and creative industries by various measures (G)	The government supported the development of cultural and creative industries by various measures (G)
			The government proposed a six-pronged approach to use a 10 billion Patacas fund that aims to boost financial support to the community (G)	The government proposed a six-pronged approach to use a 10 billion Patacas fund that aims to boost financial support to the community (G)	The government proposed a six-pronged approach to use a 10 billion Patacas fund that aims to boost financial support to the community (G)	The government proposed a six-pronged approach to use a 10 billion Patacas fund that aims to boost financial support to the community (G)
			Organize and provide online training and learning (P, G, O)	Organize and provide online training and learning (P, G, O)	Organize and provide online training and learning (P, G, O)	Organize and provide online training and learning (P, G, O)
				Phase I consumption subsidy plan implemented (G)	Phase I consumption subsidy plan implemented (G)	Phase I consumption subsidy plan implemented (G)

Source: Various. Refer to Table 2

assistance, and work to overcome difficulties. The companies cooperated with the government's directive without laying off local employees or reducing wages. From this, questions of motivation arise: Is this performance laudable, or was it fully determined by the government, their staff and even the entire Macau society? Is fulfilling social responsibility, even under the conditions of virtually no income, in line with the original expectations of commercial enterprises to perform "socially desirable activities"? The viewpoint of one legislative council member may help to shed some light on this. He pointed out that "gaming operators should not take on 'unrelated' social responsibilities. For example, building dormitories for employees should not be their responsibility. Their main responsibility is to make a contribution to the tax system, while the government uses a fiscal surplus [generated by this taxation] to do other constructions" [6].

With the arrival of the second wave of non-local COVID-19 cases (April–May, 2020), it was not feasible to implement home isolation because of the transmission path of the virus, the potential risk to the community and the huge cost imposed by such a measure that may be paid by the economy and society. The government began to look for suitable hotels as quarantine venues for medical observation (refer to Test in Figure 3). Since March 2020, 12 hotels have been used for medical observation. These hotels expressed their willingness to take on the social responsibility, and support and cooperate with the government's medical observation measures (refer to Evidence in Figure 4). Gaming operators had been laying off non-local staff since the virus outbreak in February. To ensure the livelihood of local employees, the government called on gaming enterprises not to lay off any local residents. Many operators were under financial stress across February, March and April, 2020. To reduce the burden, some board members gave up their directors' emoluments, management levels participated in unpaid leave schemes and many employees participated in special family care flexible leave schemes (refer to Test in Figure 3). However, even with virtually no income, gaming operators kept donating supplies or cash to the local community and purchased goods and services from local SMEs (refer to Evidence in Figure 4).

In the special economic environment of Macau, gaming companies have greater revenue producing capacity than the government, and employees naturally have weak bargaining power. As has been noted, local employment is a significant concern for the government. During the epidemic, the government has repeatedly called on gaming companies to try their best to ensure the employment of local residents during this challenging period and to coordinate with employees to help them tide over the difficulties. The government has also periodically communicated with gaming companies to understand their employment status. Dialectically and from a legal point of view, gaming companies have a right to decide whether to renew contracts or lay off employees, and increase or decrease staff benefits. However, as the government has implemented a people-oriented governance philosophy, the people's livelihood, especially local employment, is a significant point of focus and concern.

In a market economy, the goals of all corporate behaviors are to maximize shareholders' interests; the rationality of protecting a corporation's self-interest is recognized (Ridley-Duff, 2008) and is opposite to the government's efforts to seek benefits for the general public. There is no doubt that a series of measures taken by the government are to safeguard and protect the rights and interests of residents employed by gaming companies. Regarding the practice of bonus distribution and other benefits offered by the gaming operators, the community needs to be made aware of the long-term costs of boom-time expectations of government and employer largess that become disproportionate in times of economic distress.

Since May 2020, when the epidemic risks eased, the government began to introduce a series of economic measures to boost local spending (refer to Higher Common Principle in

Figure 2 and Evidence in Figure 4). Local associations and business sectors, including the gaming and hospitality industry, actively cooperated with the government's economic stimulus measures to realize this goal (refer to Evidence in Figure 4). In concert with these economic measures, the government, together with local institutions as well as the gaming operators, organized a variety of online training and learning programs to help those in need for re-employment (refer to Evidence in Figure 4).

The roadmap (Figure 2) reveals that government, business operators or residents are all parts of a community of common destiny. As a consequence, the inference is no party should stand idly by. When the threat of virus outbreak hung over the city, panic was deemed futile and could even worsen the situation. Although evasion could provide a moment of peace, after the outbreak, there would certainly be a condemnation of conscience and moral disdain from others afterward. Only by actively facing, taking initiative and executing a united front against the epidemic, can all sectors of the public fulfill the meaning of social responsibility. These mechanisms are also a vivid practice of building, protecting and defending the community of common destiny. However, from a dialectic perspective, it is unequivocal that the government should exercise rights to supervise the gaming sector, to govern high-income gaming companies and to protect local employment. The society, as a whole, needs to maintain a balanced view on the relationships among the government, gaming operators and the local community.

8. Sociology of worth framework during COVID-19

As mentioned, we roughly mark the beginning of the focal COVID-19 period from February 4, 2020 [when local casinos were shut for 15 days (Stevenson, 2020)]. In particular, on February 20, 2020, the Macau government restricted entry from mainland China (Wong, 2020). At the time of writing this paper, the status of the virus in the city has become relatively stable with no new infections recorded since mid-July 2020 in Macau, and zero deaths reported. The government has begun to allow Macau residents to apply for travel to the Greater Bay Area (nine cities in Guangdong). Nevertheless, the city has still disallowed visitors from high-risk regions, including nearby Hong Kong and parts of the mainland to enter Macau. Most transportation has been suspended and strict quarantine measures have been implemented. But starting July 15, 2020, quarantine was lifted for all mainland Chinese residents from all provinces to Macau (Lam, 2020). Therefore, we define the COVID-19 period to be from early February to mid-July 2020. During the same period, cases in the USA and Brazil (and later India) pushed the worldwide death toll up significantly (Worldmeters, 2020).

Together with the collected information, the roadmap and content analysis, we present here a SOW matrix (Table 4) describing the situation in the COVID-19 period again with reference to the people (P), the government (G) and the gaming operators (O). One can compare this with the pre-COVID-19 SOW to see the tremendous effects of such a critical incident.

9. Compromising for the common good

Examination of the SOW matrices for both pre-COVID-19 and COVID-19 periods indicates that the higher common goals of the different worlds of the P, G and O have been greatly affected by the pandemic. For example, this manifests in the transformation from a world-famous gaming and leisure city (although with a "lonely economy" as a trade-off) to a dead city, and the slide from the world's biggest gaming revenue generator to lay-offs and salary cuts plus a government budget in deficit. "Cracks" as mentioned previously must have happened between the different worlds of the P, G and O. Boltanski and Thévenot ([1991] 2006, p. 285) suggested the issue of "compromising for the common good," for example,

	Fame	Domestic	Industrial	Market	Civic
Higher common principle	Hope to restore social and business routines (P, G, O), well-organized control system for the virus (G)	Preservation of health (P, G, O)	Hope to restore revenue from gaming, tourism and hospitality (P, G, O)	Looking for diversification strategies (G, O)	Family stability and health (P)
Investment formula	Strict prevention and control measures (P, G, O)	Observe government directives (P, O)	Maximize efficiency through laying off import laborers (G, O)	Attracting local spending (G, O)	Observe government directives (P, G)
Test	No significant social unrest (P, G, O)	Employment rate and lay-offs of import workers (P, G)	Ratio of local and import workers (P, G, O), salary cut and no-pay leave (P, O)	More cash sharing and local visitation incentives, re-training (P, G, O)	Social stability and welfare (P, G)
Evidence	Monetary injection into the economy (G), heightened CSR (O)	Higher awareness of CSR (O) and personal hygiene (P)	CSR activities, donations, support for the poor (P, G, O), online working and learning (P, G)	Budget cut and use of government money entirely on social spending (P, G), economic loss (P, O)	Cash sharing and charitable activities, fundcrowding (P, G, O), social problems (P)
Sacrifice	Even "lonelier" economy (P, G, O)	Even "lonelier" economy, zero gaming income (O), deficit budget (G)	Even "lonelier" economy (P, G, O), zero gaming income (O)	Even "lonelier" economy (P, G, O), zero gaming income (O), deficit budget (G)	Family issues (P), pressure on health care system (P, G)

Table 4. SOW concerning the people (P), the government (G) and the gaming operators (O) during COVID-19

through developing a state of compromise such as a civic-industrial polity. Compared to other places (for example, the USA and Hong Kong), the P, G and O transitioned through the pre-COVID-19 period to the COVID-19 period without any severe social unrest. This is an example of using compromises to address the cracks and to unite the common principles of the worlds of the P, G and O.

Perkiss and Moerman (2020, p. 10), in their SOW study of the 2005 Katrina disaster in America, raised the matter of reconstruction, and cited the speech of President Obama which stated that the reconstruction of New Orleans had been possible through hardship and good people working hand in hand, “brick by brick, block by block and neighborhood by neighborhood.” However, cracks remained because the different worlds functioned at different synchronicities. Perkiss and Moerman pointed out that the civic world’s solidarity was evident but the industrial world was still misaligned. Managing the complex and delicate connections among the different worlds is therefore essential in forging effective compromises. They cited also Boltanski and Chiapello ([2005], 2007) who stated that single events equip actors with the capacity to both disrupt and categorize ideological underpinnings and shared values inscribed in economic activities. For example, in the case of New Orleans, the beliefs of the elite class and the lower social class require a higher common principle for the entire community (Baker, 2014, p. 622, discussed the issue of institutional racism in New Orleans).

Finally, it is interesting to note that in the notion of “figures of compromise” (Boltanski and Thévenot ([1991] (2006), pp. 292–335), each of the six worlds can individually compromise with the other five. As a consequence, many figures of compromise to attain higher common principles can be created. To provide some examples, compromises between the domestic world and the world of fame facilitate mutually beneficial relationships between the two (p. 306). Compromises between the domestic world and the civic world lead to respectful behavior toward civil servants, good sense in applying rules and the extension of civil rights (pp. 306–310). Compromises between the civic world and the industrial world create workers’ rights, effective methods of mobilization, increased productivity of motivated workers, working in groups, certification of competency and efficiency of public services (pp. 325–331).

Last but not least, Boltanski and Thévenot ([1991] 2006, pp. 350–351) also discussed crisis. A crisis resulting from divergent judgments will halt actions. A common effort to reduce uncertainty regarding a given reality leads to qualifications that convey assurances about the future, and the actors involved will lend their own support to judgments purporting to be of general validity. With this in mind, the final discussion and conclusion of this paper follows.

10. Conclusion

In the era of global inter-connectedness, it is impossible for any government, enterprise or individual to “be independent.” The COVID-19 pandemic is a timely and long-term mirror through which co-operation, responsibilities and thousands of related images are fully reflected. Macau is the only region in China that legally allows casinos. It has advantages which are difficult to obtain in other countries and regions, such as its enjoyment of preferential policies from the central government. However, as a “lonely economy,” the gaming industry always bears the risk of turbulence from external economic factors.

The current study has investigated the social accounting behavior and practice of the government (G), gaming operators (O) and people (P) during the COVID-19 pandemic based on the SOW framework. The findings reflect the general public’s view that the CSR behavior

of gaming companies should stem from a perspective of “what is taken from society should also be used for the interests of society.” Therefore, whenever a crisis arises, gaming operators are considered above shirking and under the obligation to cooperate with the government in maintaining social stability. However, a deeper consideration suggests this kind of stability is only temporary, a chance for the gaming industry to show the other side of its controversial nature and another opportunity to renew its social license to operate.

When CSR becomes a long-term burden for gaming operators, then even the most basic function of maintaining business profitability will be jeopardized. Eventually, it will bring further risk to the city given its “lonely economy.” As such, the positive image developed by the gaming operators will soon be lost and become unsustainable. Therefore, this challenge of balancing profitability against giving back to the community will become one of the most important issues for the government, society and gaming operators to consider after the pandemic. However, the light shed by the circumstances of the pandemic upon this delicate balance means that gaming operators, the government and even the public possess a more nuanced understanding of governance and sustainability, operation and responsibility, profit and public welfare, rescue and sacrifice, which has the potential for broader consensus to be reached.

As a concluding remark, first, this study is a primary attempt to frame a controversial industry using SOW under the unprecedented effect of COVID-19. Issues such as governance, accountability and sustainability have all been touched on using this example. Second, the paper uses a critical lens even though the analysis has described various actions taken by the government (G) to reduce the impact of the crisis on the society. It should be understood here that any action taken by the government (G) or the gaming operators (O) may create positive as well as negative reactions from the people (P) or community. Therefore, it is not a matter of explicitly describing the positive side of all the effective measures taken by the G, O and P to fight during this time of viral attack. It is also a time for the related parties to take this once-in-a-lifetime experience to reflect on their respective social roles and thus to develop a sustainable approach to CSR, regardless of how controversial the industry may be, how the government is run in line with broader directives or even nudged by global imperatives of inter-connectedness.

Notes

1. In accordance with the stipulations in Macau’s gaming law (Law No. 16/2001 – Regime governing the operations of casino games of fortune), 35% of the gross gaming revenue derived by casino operators is levied as tax by the government. In addition, gaming operators are subject to social contributions to the government’s designated public funds, which account for approximately 5% of their gross gaming revenue, to support Macau’s urban development, social security and other services.
2. Data from Macau Statistics and Census Service.
3. We do not call Macau’s economy a “singular” economy. Instead, we coin this a “lonely” economy. Loneliness is definitely used as a personal psychological state. However, we use this term to highlight concern at the over-reliance on the gaming industry. This is not to be confused with the issue of being singleton and its effect on an economy ([The Guardian, 2013](#)).
4. At the time of writing this piece, COVID-19 has already slowed around the Guangdong area of China. However, the virus is still threatening lives in many regions of the world. Therefore, any post-COVID-19 framework applies only to the subject being studied in this research, that is, Macau and its gaming industry. That is why we call this scenario a hypothetical post-COVID-19.

5. <https://finance.sina.com.cn/stock/hkstock/hkstocknews/2020-07-01/doc-iirczymk9951780.shtml>
6. <https://zh.asgam.com/index.php/2020/04/22/no-cuts-to-macau-gaming-tax-under-re-tendering-but-government-offers-olive-branch-on-csr-expectations-zh/>

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