Relief, Recovery, and Revitalization Measures for Tourism and Hospitality Industry During Covid-19 Pandemic: Case Study From Taiwan

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Abstract
The Covid-19 pandemic has severely disrupted lives and economies around the world. Every part of tourism and hospitality value chain has been affected by the unprecedented travel and mobility restrictions (border control, lockdowns, quarantines, curfews, social distancing) undertaken by governments to contain the spread of the virus. This case study is an in-depth investigation on the Taiwan’s government response to support tourism industry stakeholders during Covid-19 pandemic. Data are gathered from a variety of sources, including government policy, procedures, and interviews with business owners and observations of day-to-day business operations. This study presents novel effective government practices and cooperation with tourism and hospitality business during Covid-19 pandemic crisis.

Keywords
Covid-19 crisis, tourism and hospitality sector, Taiwan

Introduction
In a matter of months, rapid spread of Covid-19 has led to global pandemic and has heavily affected human society and the global economy. As of November 15, 2020, there were 53.7 million confirmed cases of Covid-19 in 210 countries or territories, including 1,192,911 deaths, reported to the World Health Organization (WHO, 2020). Covid-19 is a virus highly transmitted through direct (i.e., contact with an infected person) or indirect contact (i.e., touching surfaces contaminated with the virus), which can lead to a serious respiratory disease (Polyzos et al., 2020). An infected person can transmit the virus for several days before experiencing the symptoms (high fever, difficulty breathing, coughing, or sneezing) and knowing to self-isolate or take other measure like physical distancing or wearing a face mask (Bai et al., 2020; Rothe et al., 2020). Governments have taken an unprecedented scale and complexity of responses to prevent the spread of Covid-19 virus across and within countries and to deal with the major health care crisis (Alon et al., 2020; Gao & Ren, 2020). These responses included containment measures (such as border control, lockdowns, quarantines, curfews, social distancing) and assistant measures using technology (such as case identification, proactive case finding, and monitoring the suspicious infected individuals; Ministry of Foreign Affairs, 2020; C. J. Wang et al., 2020). These measures help to lower the spread of the disease, but simultaneously negatively affect social and economic development. International, regional, and local travel bans and stay-at-home orders have affected more than 90% of the world population and made a devastating impact on the economies (Gossling et al., 2020; Gössling et al., 2021).

Differences in population density, poverty, and the quality of health care across countries have affected variety and effectiveness of the responses taken by the governments, businesses, and individuals in general and in relation to the tourism industry in particular (Gossling et al., 2020). Effectiveness of the undertaken measures depends on collaborative efforts among all stakeholders including (but not limited to) the national and local governments, businesses, and members of the public. Understanding the factors that contribute to positive outcomes (Dogru & Bulut, 2018) is important as analysis and comparison of the responses could
lead to novel and unique insights and developments for theory and practice (Jones et al., 2013; Shroder, 2014). Many recent studies focus on the overview of the pandemic’s influence on society or economic development; others emphasize psychological impacts (Brooks et al., 2020; Ozili & Arun, 2020). These studies show that there is a direct relationship between the Covid-19 pandemic and the economic decline (Chou et al., 2004; Garrett, 2007; Meltzer et al., 1999; Ozili & Arun, 2020), as well as an impact of this pandemic on mental issues (Brooks et al., 2020).

There are an increasing number of studies investigating the impact of Covid-19 on many service industries, ranging from the tourism and hospitality sector through to the retail and leisure industries (Williams & Kayaoğlu, 2020). The tourism and hospitality industry has been particularly affected by the measures of restricted mobility, public gatherings, and social distancing taken to counteract the Covid-19 pandemic, and the industry is in a deep crisis (Chinazzi et al., 2020; Gössling et al., 2021; Ying et al., 2021). Along with the loss of life, Covid-19 caused tens of millions of tourism and hospitality employees to lose their jobs and thousands of businesses struggle to survive or ceased to exist. The Covid-19 pandemic is transforming all parts of the hospitality value chain with governments only beginning to understand the implications for the industry (Gössling et al., 2020). Considering tourism and hospitality businesses’ huge influence on social and economic development of regions and countries, and provision of job opportunities to many people (Holjevac, 2003) and given the continual spread of Covid-19 around the world, understanding the effective government and businesses’ responses may be instructive for other countries (C. J. Wang et al., 2020) and positively affects tourism and hospitality industry.

Taiwan (Republic of China) has had successfully controlled Covid-19 virus in ways that other nations have not and was praised for its Covid-19 response because of the speed and its ability to manage the spread and keep case counts lower than other nations comparable in size and scope (Peng, 2020). Despite Taiwan being particularly at risk to the spread of Covid-19 virus due to close proximity and business ties with China (C. J. Wang et al., 2020), it is considered to be more successful than many others in containing the spread of Covid-19 (Bickenbach & Liu, 2020). Taiwan is located 81 miles off the coast of mainland China, with 850,000 Taiwanese residing in and 404,000 working in China (Taiwan’s total population is 23 million people; C. J. Wang et al., 2020). A total of 2.71 million travelers from China have visited Taiwan in 2019, with 7,515 people flying from Wuhan just before the Chinese New Year between December 30, 2019, and January 22, 2020 (C. J. Wang et al., 2020). Despite close ties and location, and many flights from the Covid-19 epicenter, measures undertaken by Taiwan’s government and businesses limited confirmed cases to just 602 as of November 15, 2020 (19 confirmed cases per million), the majority of 510 cases classified as imported and seven deaths from the virus (Hille, 2020b; Taiwan Centers for Disease Control [TCDC], 2020b).

In response to the accelerating spread of Covid-19, Taiwan’s government introduced temporary travel ban for foreign nationals entering the country as well as advised local residents against all nonessential travel abroad starting from March 19, 2020 (Bureau of Consular Affairs, 2020); however local travel was not affected. Effective management of Covid-19 pandemic allowed Taiwan to avoid introducing such measures as national lockdowns implemented by many countries around the world. Schools, offices, restaurants, entertainment facilities, and sport events in Taiwan remain open and function as usual (Hille, 2020b). In January 2020, domestic travel increased by 43.99% compared with the same period previous year; similar trend was with retail and restaurant profits, and in April 2020, 1.5 million Taiwanese continued to travel around the island (The Tourism Bureau, 2020). While Covid-19 pandemic created an immediate effect on the country’s economy, and companies in Taiwan are affected by global economic challenges as anywhere else, local operations have been much less affected (Bickenbach & Liu, 2020).

Taiwan’s success in containing the spread of Covid-19, despite their geographic proximity to and intensive economic ties with China (Bickenbach & Liu, 2020), has led to a number of studies looking into the effectiveness of Taiwan Covid-19 pandemic response in relation to public health and infections control (Bickenbach & Liu, 2020; Schwartz, 2020; C. J. Wang et al., 2020), including efficient governance, high quality of medical research and health care, and a smart use of digital technologies (Bickenbach & Liu, 2020). Taiwan’s efficient response to contain the spread of Covid-19 in the country shows government’s competence in dealing with complex societal and economic situations (Bickenbach & Liu, 2020), while continuous operation of the internal tourism and hospitality sector shows coordinated and interdependent efforts among relevant stakeholders. However, there have been no studies focusing on the Covid-19 pandemic impact on Taiwan’s tourism and hospitality industry and the country’s response to support the industry. Given the importance of the industry—tourism brings around US$13 billion annually (Shan, 2019)—there were more than 10 million international tourists, spending 6.46 nights on average in the past 5 years (Shan, 2019)—understanding the effective government and businesses’ responses is instructive for other countries (C. J. Wang et al., 2020). Therefore, this case study aims to bring deeper insights into emerging effective practices undertaken by Taiwan government and businesses in the context of tourism and hospitality industry during a crisis, such as Covid-19 pandemic.

This article begins by examining the impact of Covid-19 outbreak on Taiwan tourism and hospitality industry stakeholders. The next section of the article provides an overview of research methods and data gathered from a variety of sources via analysis of government policy and procedures.
and interviews with tourism and hospitality business owners, followed by the analysis of recovery policies and practices undertaken by the government to support tourism and hospitality sector. In particular, case study presents such business cooperation practices as qualifying to become a quarantine hotel, quarantine taxi, subsidizing food delivery service to support catering businesses, and Covid-19 health and safety employee training for tourism business owners along with provision of face masks and alcohol due to high deficit of those materials during Covid-19 pandemic.

Findings of this study help to better understand effective policies and practices that could be adopted and implemented to support tourism and hospitality industry in other countries in response to a crisis, such as Covid-19 pandemic. Furthermore, the study informs hotel, restaurant, and travel agency owner/managers about ways to manage their business by taking cost-effective proactive measures such as employee health and safety training, proactive customer communication about social distancing, hygiene, and frequent washing of hands to ensuring everyone’s safety and well-being. The article concludes with the identification of future research issues involving tourism and hospitality sustainability during a crisis, such as Covid-19 pandemic.

### The Impact of Covid-19 on Taiwan Tourism and Hospitality Industry

To understand the impact of the Covid-19 pandemic on Taiwan’s economy and hospitality industry, we follow the previous studies (Bonn et al., 2005; M.-H. Chen et al., 2007; Dogru & Bulut, 2018) and analyze three aspects including inbound visitors (i.e., international tourists), domestic tourists, and the stock price of companies in the hospitality industry.

Previous studies argued the causal relationships between tourism development and economic growth due to inbound visitors’ contribution to the economy (Dogru & Bulut, 2018). The most obvious effect of the Covid-19 outbreak on Taiwan’s tourism and hospitality industry is the decline of inbound international tourists (Table 1). Hence, monitoring of inbound visitors is important; we compare the number of inbound visitors from October 2018 to March 2020. During this period, most of the inbound visitors are coming from Asia (88.76%), followed by Americas (6.59%) and Europe (3.27%). Before the outbreak of Covid-19 pandemic, the inbound visitor numbers are steady. For example, the change rates are −3.10% for Asia and 12.29% for Europe in October, and −6.54% for Africa and 2.09% for Europe in November. However, after the outbreak of the Covid-19 pandemic, inbound passenger traffic from Asia had the worst decline of 93.38% in March 2020, followed by Americas 88.84% and Europe 86.37%. In the first quarter of 2020, inbound visitors from Asia declined by 58.49%; Americas, −47.22%; and Europe, −45.60% (see Table 1).

Inbound and domestic tourism segments have independent impact on the economic development (Bonn et al., 2005; Dogru & Bulut, 2018). Therefore, we analyze the data on domestic tourists in 316 scenic spots of Taiwan. Data show a slow and steady increase of domestic tourists before the Covid-19 pandemic outbreak in October and November 2019. This increase slowed down to only 2.81% change in December 2019. But a huge dropdown took place in February and March 2020, when domestic tourists declined by 34.80% in February and by 52.47% in March 2020 (see Table 2). There was a dramatic turning point from positive to negative growth between January and March. In that year, the beginning of the Chinese new year holiday in January, which coincides with the early times of the Covid-19 pandemic (WHO, 2020), may be driving people to consider traveling in domestic rather than outbound tours. With the Covid-19 pandemic cases increasing globally, the domestic tourists also declined, and this phenomenon is obviously observed in March.

Changes in the stock prices also indicate the economic impact on the industry (M.-H. Chen et al., 2007). We compared the stock prices of companies in Taiwan’s hospitality industry before the outbreak of the Covid-19 pandemic, and five ($\Delta CH_{t}$) and six ($\Delta CH_{t+6}$) months afterward. The initial checkpoint day is November 29, 2019, 2 days before the Covid-19 outbreak, and the afterward checking days are April 29 and May 29, 2020, 5- and 6-month period. The stock prices of 14 listed companies have dropped dramatically, falling from between 10% and 40%. The average drop is 20% that reflects the significant impact of Covid-19 pandemic. Shortly afterward, the stock market had gradually recovered and stabilized in June 2020. Perhaps this happened due to the government revitalization plan, quick response of the hospitality industry, or the effective control of the pandemic outbreak in Taiwan (see Table 3).

### The Relief Measures for the Hospitality Industry

Faced with the unprecedented global crisis, the Legislative Yuan, the parliament of Taiwan proposed and promulgated a “Special Act” on Covid-19 prevention, relief, and recovery to authorize a special budget on March 18, 2020. As the pandemic continued to rage around the world, Taiwan amended the Covid-19 relief act to add more to the special budget. In the end, the total relief package reached NT$1.05 trillion to be used in three stages, including preventive measures, bailout, and revitalization of the domestic industry (Executive Yuan, 2020). Having the Covid-19 pandemic under control in March 2020, Taiwan’s authorities proposed short-term bailout schemes for emergency assistance to keep business operations and long-term revitalization and transformation plans to improve the quality of Taiwan’s hospitality industry (Executive Yuan, 2020).

The main bailout schemes can be divided into four categories including bailout for relief, loan advance, operating subsidies, and wage subsidy programs (see Table 4). The total beneficiaries include the travel agencies (3,990, nearly...
## Table 1. The Statistic of Inbound Visitors and Monthly and Quarter Comparison Between 2018 and 2020.

| Year | Month | Asia | Africa | Americas | Oceania | Europe | Unknown |
|------|-------|------|--------|----------|---------|--------|---------|
| 2018 | Oct   | 843,792 | 980 | 65,871 | 11,719 | 37,258 | 154     |
| 2018 | Nov   | 893,746 | 1,131 | 75,647 | 11,075 | 37,186 | 236     |
| 2018 | Dec   | 998,967 | 1,168 | 76,655 | 18,770 | 29,398 | 154     |
| 2019 | Jan   | 768,758 | 833 | 57,371 | 14,196 | 29,398 | 154     |
| 2019 | Feb   | 869,039 | 1,135 | 51,172 | 7,887 | 26,767 | 202     |
| 2019 | Mar   | 957,661 | 1,026 | 72,800 | 9,296 | 38,992 | 170     |
| 2019 | Apr   | 976,547 | 1,041 | 67,997 | 16,646 | 38,992 | 170     |
| 2019 | May   | 936,715 | 895 | 63,049 | 9,071 | 29,877 | 151     |
| 2019 | Jun   | 836,481 | 821 | 63,539 | 8,162 | 29,877 | 151     |
| 2019 | Jul   | 886,770 | 1,098 | 60,699 | 9,296 | 30,765 | 137     |
| 2019 | Aug   | 937,523 | 1,259 | 55,783 | 6,901 | 29,326 | 145     |
| 2019 | Sep   | 704,612 | 1,168 | 49,564 | 7,887 | 29,326 | 145     |
| 2019 | Oct   | 817,610 | 1,025 | 66,684 | 11,826 | 41,837 | 149     |
| 2019 | Nov   | 864,737 | 1,057 | 75,546 | 10,919 | 37,965 | 173     |
| 2019 | Dec   | 1,005,246 | 1,201 | 82,049 | 20,650 | 33,892 | 163     |
| 2020 | Jan   | 701,467 | 861 | 62,860 | 16,551 | 29,368 | 1,863   |
| 2020 | Feb   | 312,578 | 862 | 24,722 | 3,911 | 15,179 | 105     |
| 2020 | Mar   | 63,359 | 227 | 8,127 | 1,301 | 5,225 | 20      |
| 2020 | Apr   | 2,094 | 1 | 232 | 19 | 211 | 2       |
| 2020 | May   | 2,424 | 9 | 381 | 25 | 374 | 37      |
| 2020 | Jun   | 5,826 | 28 | 675 | 59 | 710 | 193     |
| 2020 | Jul   | 9,301 | 35 | 1,241 | 86 | 1,056 | 29      |
| 2020 | Aug   | 15,266 | 64 | 1,396 | 113 | 1,592 | 105     |
| 2020 | Sep   | 20,115 | 81 | 1,476 | 141 | 1,673 | 34      |
| 2020 | Oct   | 15,525 | 116 | 1,519 | 142 | 1,648 | 32      |
| 2020 | Nov   | 17,456 | 100 | 1,938 | 142 | 1,478 | 63      |
| Total |   | 14,463,615 | 18,200 | 1,088,994 | 198,914 | 549,108 | 5,030 |
| Percentage |   | 88.60 | 0.11 | 6.67 | 1.22 | 3.36 | 0.03   |

The monthly comparison between 2019 and 2020 (or 2018–2019):

| Month | ΔOct | ΔNov | ΔDec | ΔJan | ΔFeb | ΔMar |
|-------|------|------|------|------|------|------|
| Oct   | -3.10% | -6.54% | 1.23% | 0.91% | 12.29% | -3.25% |
| Nov   | -3.25% | -6.54% | -0.13% | -1.41% | 2.09% | -26.69% |
| Dec   | 0.63% | 2.83% | 7.04% | 10.02% | 15.29% | 5.84% |

The monthly comparison of inbound visitors (IV) was calculated from changes in the same month with the previous year in the number of inbound visitors (IV):

\[ Δ = \frac{(IV_{current} - IV_{previous})}{IV_{previous}} \times 100 \]

First quarter comparison between 2019 and 2020:

| Quarter | Δ1st quarter | Δ2nd quarter | Δ3rd quarter |
|---------|-------------|-------------|-------------|
| 2019–2020 | -55.10% | -20.37% | -42.34% |
| 2018–2019 | -99.62% | -99.62% | -99.62% |
| 2019–2022 | -98.23% | -94.86% | -97.52% |

Source: The data were taken from Tourism Statistics Database of the Taiwan Tourism Bureau.

Note: The monthly comparison of inbound visitors (IV) was calculated from changes in the same month with the previous year in the number of inbound visitors (IV): \( Δ = \frac{(IV_{Dec-2019} - IV_{Dec-2018})}{IV_{Dec-2018}} \times 100 \), where IVDec-2018 and IVDec-2019 are the individual monthly inbound visitors in Dec 2018 and 2019, respectively. The similar calculation was used in ΔJan, ΔFeb, and ΔMar.
Research Design and Methodology

This article is a case study with an exploratory perspective research which provides an excellent means of studying emergent practices (Finch & Crunkilton, 1999) and is used to gain deeper insights into contemporary and complex issues within real-life context (Yin, 1994). Authors also support the view that case studies carried out in cooperation with business owners and practitioners from the industry represent a suitable methodology for creating practically relevant knowledge (Amabile et al., 2001; Gibbert et al., 2008).

Data Collection

We collected publicly accessible sources of evidence of the effect of the Covid-19 outbreak on the tourism sector, especially hotel, restaurant, and travel agent segments of the industry from print, digital, audio, and video (interviews, speeches, and talks by tourism and hospitality stakeholders) materials. Most of the data came from the official websites of the authorities (Tourism Statistics Database of the Taiwan Tourism Bureau, Taiwan Stock Exchange Corporation [TWSE] database). This has provided a better understanding of the situation with Taiwan’s tourism and hospitality industry in the wake of Covid-19 pandemic. To analyze Taiwan’s government response measures in relation to the tourism and hospitality industry, authors collected secondary data from various sources, as well as conducted interviews with hotel and restaurant business owners. Secondary data sources were major policies of Executive Yuan, the tourism policies of Tourism Bureau of Taiwan, the Schemes of Ministry of transportation and communications, the regulations of “COVID-19 Pandemic” Response Guidelines: installation and management of quarantine hotel, TCDC, newspaper publications, and other official websites.

The list of potential interviews was discussed with several contact people from the tourism and hospitality industry and was expanded to include knowledgeable business owners and managers from business associations, who could

| Year | Month | Subtotals |
|------|-------|-----------|
| 2018 | Oct   | 23,475,506 |
| 2018 | Nov   | 21,961,966 |
| 2018 | Dec   | 24,243,311 |
| 2019 | Jan   | 22,602,899 |
| 2019 | Feb   | 45,631,333 |
| 2019 | Mar   | 31,196,380 |
| 2019 | Apr   | 27,026,973 |
| 2019 | May   | 23,796,661 |
| 2019 | Jun   | 24,339,930 |
| 2019 | Jul   | 27,988,626 |
| 2019 | Aug   | 25,115,976 |
| 2019 | Sep   | 21,842,499 |
| 2019 | Oct   | 26,973,550 |
| 2019 | Nov   | 25,202,843 |
| 2019 | Dec   | 24,924,615 |
| 2020 | Jan   | 32,346,339 |
| 2020 | Feb   | 29,575,753 |
| 2020 | Mar   | 14631,170 |
| 2020 | Apr   | 12,801,343 |
| 2020 | May   | 15,184,720 |
| 2020 | Jun   | 19,872,863 |
| 2020 | Jul   | 25,344,166 |
| 2020 | Aug   | 27,716,546 |
| 2020 | Sep   | 20,041,143 |
| 2020 | Oct   | 26,728,188 |

Source. The original data source is Tourism Statistics Database of the Taiwan Tourism Bureau.

Note. The monthly comparison of domestic tourists (DT) on scenic spots was calculated from changes in the same month with the previous year in the member of domestic tourists (DT): \( \Delta \text{Oct} = \left( \frac{\text{DTOct-2019} - \text{DTOct-2018}}{\text{DTOct-2018}} \right) \times 100 \), where DTOct-2018 and DTOct-2019 are the individual monthly domestic tourists in Oct 2018 and 2020, respectively. The similar calculation was used from \( \Delta \text{Nov} 2019 \) to \( \Delta \text{Oct} 2020 \). The subtotals are gathered in 316 scenic spots in Taiwan.

44,000 employees), hotels (3,500, nearly 90,000 employees), homestay/B&B (9,000), tourism/entertainment companies (25, nearly 6,000 employees), and in job, the tour guides/leaders of about 40,000 people (Taiwan Teen, 2020).
Table 3. Hospitality Companies Listed in the Taiwan Stock Exchange (TWSE) Market.

| Company                        | Date of being listed | Price per share (in NT dollar) | Share capital (in millions) |
|--------------------------------|----------------------|--------------------------------|----------------------------|
| Holiday Garden Hotel           | June 1, 1965         | 19                             | 110.5                      |
| The Ambassador Hotel Co. Ltd.  | November 10, 1982    | 29.2                           | 366.9                      |
| Leefoo Development Co. Ltd.    | December 24, 1988    | 15.05                          | 186.5                      |
| First Hotel                    | June 25, 1991        | 15.2                           | 500                        |
| Formosa International Hotels   | March 9, 1998        | 170                            | 127.4                      |
| Farglory hotel                 | December 3, 2013     | 57.8                           | 105                        |
| Château hotel and resort       | March 14, 2012       | 24.95                          | 111.5                      |
| Gourmet Master Co. Ltd.        | November 22, 2010    | 122.5                          | 180                        |
| Wowprime. Corp                 | March 6, 2012        | 81.8                           | 77                         |
| Lion Travel                    | September 24, 2013   | 76.5                           | 70                         |
| My Humble House Hospitality    | May 19, 2016         | 24.65                          | 111.5                      |
| FDC International Hotels       | November 23, 2016    | 53.3                           | 65.6                       |
| Phoenix Tours                  | November 30, 2001    | 38.5                           | 6.13                       |
| New Place International Co. Ltd.| January 17, 2003    | 11.7                           | 67.5                       |

### Source
The stock prices of companies were taken from the Taiwan Stock Exchange Corporation (TWSE) database.

### Note
Five-month change of stock price ($\Delta CH_5$) was calculated from changes in 5-month stock price ($P$): $\Delta CH_5 = \frac{P_{Nov} - P_{April}}{P_{Nov}} \times 100$, where $P_{Nov}$ and $P_{April}$ are the individual monthly stock prices in November 2019 and April 2020, respectively. The same calculation was used in 6-, 9-, and 12-month change of stock price ($\Delta CH_6$, $\Delta CH_9$, and $\Delta CH_{12}$).
Table 4. Taiwan Relief Measures for the Hospitality Industry in Covid-19 Pandemic.

| Act items | Purpose | Issue date | Contents | Objective | Categories |
|-----------|---------|------------|----------|-----------|------------|
| Act 1     | Subsidies for departure in advance | February 13, 2020 | Subsidy target: for travel agencies those who had received the booking from China tour groups or the China tour groups still stay in Taiwan, by fully subsidizing the “ticket” and “visa” fees, for early departure. | Business owner | Operating subsidies |
| Act 2     | Subsidies for outbound travel business | April 28, 2020 | Subsidy target: for administrative operation fees, such as cancelation of the contract, refunds, or suspension of operation in the outbound travel business for cooperating with the government pandemic preventive measures. | Business owner | Bailout for relief |
| Act 3     | Subsidies for inbound tourism business | April 15, 2020 | Subsidy target: for the nondomestic hospitality industry, such as overseas travel agencies, international cruise companies, incentive travel companies, or local pickup travel business by providing a bailout to maintain the basic operation. | Business owner and travel agency | Bailout for relief |
| Act 4     | Promoting the development of the hospitality industry | April 22, 2020 | The purposes are as follows: 1. For promoting employee’s education and training. 2. For industrial upgrading and service transformation. 3. For safety enhancement and protection of passengers’ rights and interests. 4. For promoting digital and precise marketing. 5. For promoting the policy of the Tourism Bureau. 6. For promoting the creation of local sightseeing. 7. For promoting the cross-regional learning. | Business owner and employee | Operating subsidies |
| Act 5     | Loan advance and interest subsidies | February 21, 2020 | The purpose of loan funds is to renew equipment, renovate (repair), rebuild business premises, and capital repairs for continuity business operation. | Business owner | Loan advance |
| Act 6     | Subsidies for the livelihood for practitioners of the hospitality industry | April 16, 2020 | Subsidy target: for those who actually do the job as a tour guide or team leader with a license in the past 16 months. | Tour guide, team leader | Wage subsidy program |
| Act 7     | Subsidies for travel agency business operation and employee salary | April 16, 2020 | Subsidy target: for the legal domestic travel agency business, including the owners and employees who have logged in the official system and insured employees of labor insurance according to law. | Business owner and employee | Wage subsidy program |
| Act items | Purpose | Issue date | Contents | Objective | Categories |
|-----------|---------|------------|----------|-----------|------------|
| Act 8     | Subsidies for the hotel business operation and employee salary | May 7, 2020 | Subsidy target: for the legal domestic hotel business, including the owners and employees who have logged in the official system and insured employees of labor insurance according to law. | Business owner and employee | Wage subsidy program |
| Act 9     | Homestay and B&B bailout | April 15, 2020 | Subsidy target: for the legal domestic homestay and B&B business, which was actually in operation before March 31, 2020. | Business owner | Bailout for relief |
| Act 10    | Subsidies for running cost in the hotel business | April 16, 2020 | Subsidy target: for the legal domestic hotel business to keep run with the necessary operating costs. | Business owner | Operating subsidies |
| Act 11    | Subsidies for the amusement business operation and employee salary | May 11, 2020 | Subsidy target: for the legal amusement business, including the owners and employees who have logged in the official system and insured employees of labor insurance according to law. | Business owner and employee | Wage subsidy program |
| Act 12    | Subsidies for running cost in the amusement business | April 15, 2020 | Subsidy target: the loss of the licensed amusement business caused by group tourism is canceled for cooperating with the government pandemic preventive measures. | Business owner | Operating subsidies |
| Act 13    | Electricity and water bills discount for homestay and B&B business | May 15, 2020 | Discount target: for the legal domestic homestay and B&B business. | Business owner | Operating subsidies |

Note. The information sources are based on the major policies of Executive Yuan and the tourism policies of Tourism Bureau, of Taiwan. https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/ad3f40f1-9a79-47f6-8a2b-0883ba2c0b05, https://admin.taiwan.net.tw/FileUploadCategoryListC005100.aspx?CategoryID=19b7bd50-a49-42d8-b45-a4d87266b2be&appname=FileUploadCategory5111.
contribute to the research purpose and who are willing to participate in the study. Interviewees were chosen taking into account their exposure and firsthand experience with Taiwan’s government response measures. Interviews were arranged and scheduled by the researchers’ contacts and were mostly conducted during May to June 2020. Each interview lasted from 40 min to 2 hr and was recorded with the permission of the interviewees. Location of the interviews was the owners’ and managers’ offices. As a result of this effort, five face-to-face focused interviews with owners and top and middle managers of three hotels, restaurant, and travel agency were conducted. The following questions were guiding the conversation: What are the main areas of your business that are affected by the Covid-19 pandemic? What are the main issues for your company in relation to the Covid-19 crisis? (These questions aimed at making sure the interviewees understand what the interviews were about). How important is government support for your company? What government relief measures are relevant for your company? Do you follow a specific Covid-19-related policy and practices from the government? What new policies and practices, besides government suggestions, you have implemented in your day-to-day operations? What policies and practices do you find the most effective during the Covid-19 pandemic? Researchers also gained access to the five interview locations (hotels, restaurants, and travel agencies for observation of daily operation). The interview as well as the observation of their operations was important in providing tacit information about the complexity of joint work with the government in response to that it requires to deal with the Covid-19 pandemic. The details of the companies and respondents are not included in the article because of ethical issues and privacy agreements made before and during data collection. Gradually, the case study database was formed.

Data Analysis

The main research focus areas are as follows: government response to support the tourism and hospitality industry; tourism and hospitality companies’ cooperation with the government during Covid-19; companies’ own approaches in dealing with the impact of Covid-19 pandemic; and most effective policies and practices adopted during Covid-19 pandemic. Information from interviews was triangulated with information obtained from observation of day-to-day business operations and secondary data (Cardinal et al., 2004). After every interview, researchers discussed their notes; this process of continuous comparison of primary and secondary data led to additional data search and more focused notes. Through series of readings, relevant contents were put beside each category for every company in the study to form case stories (Eisenhardt, 1989). This resulted in five independent analyses for each case by two researchers. Next, authors proceeded with cross-case analysis (Eisenhardt, 1989; Miles & Huberman, 1984). The findings from each case study were compared in relation to Taiwan government response in relation to tourism and hospitality businesses. Findings from interviews that were supported by secondary data sources had important role for the companies, were clearly identified during data analysis, and were included into the list of effective practices to support tourism and hospitality operations during Covid-19 pandemic.

Results

Taiwan Government Relief, Recovery, and Revitalization Measures for the Hospitality Industry in Covid-19 Pandemic

Government short-term bailout schemes for emergency assistance and the long-term revitalization and transformation plans to keep business operations and to improve the quality of Taiwan’s hospitality industry included a series of rescue and supporting measures, such as airlines, hotels, and travel agencies, the country’s vast number of small enterprises (Hille, 2020a). The Legislative Yuan, the parliament of Taiwan proposed and promulgated a “Special Act” on Covid-19 prevention, relief, and recovery with special budget of NTS1.05 trillion. The main bailout schemes can be divided into four categories including bailout for relief, loan advance, operating subsidies, and wage subsidy programs (see Table 4). The total beneficiaries include the travel agency companies (3,990, nearly 44,000 employees), hotel companies (3,500, nearly 90,000 employees), homestay/B&B (9,000), tourism/entertainment companies (25, nearly 6,000 employees), and in job, the tour guides/leaders of about 40,000 people (Taiwan Teen, 2020).

Covid-19 pandemic bailout or financial aid for Taiwan tourism and hospitality industry was a short-term emergency action which was followed by a strategy for improving domestic hospitality industry in the long term. Taiwan authorities have put forward short- and long-term plans targeting the recovery and revitalization scopes to assist the hospitality industry in dealing with this Covid-19 pandemic. Beginning from February 2020, there are five main plans: recovery practice, revitalization plan for domestic tourists, revitalization plan to incentive international inbound tourists, upgrading plan of tourist attractions, and long-term plan (see Table 5). In addition, various aid relief policies are being adjusted and increased on an ongoing basis.

Participation of Key Tourism and Hospitality Industry Stakeholders

Covid-19 pandemic is an unprecedented event which played a key role in making government and tourism and hospitality stakeholders work together for an important purpose of business and economic survival. It is known that the existence of a shared goal across the stakeholders is critical to achieving sustainable results (Dowling et al., 2004). Multiple sources
| Schemes                      | Practices/programs                        | Issue date     | Contents                                                                                                                                                                                                 | Provisional budget (millions NTD) | Objective                   |
|-----------------------------|------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------|
| Recovery practices          | 1. Quarantine hotel practice              | May 13, 2020   | The government encourages the legal hotel to join the Covid-19 pandemic prevention work to build the quarantine accommodations by redecorating the room as an independent one. The subsidized target on those business owners who intend to join and decorate the room and the medical personnel who actually do the job of prevention. | N/A                               | Business owner and experts  |
|                             | 2. Increasing food delivery service practice | April 1, 2020  | Encouraging the catering industry to use the delivery service; the business operators can sign a contract with the listed delivery service company. Advance payment is managed by the delivery service company and applies for from government subsidy later for reducing the administrative procedures and costs to apply for the subsidies in the catering industry. | N/A                               | Business owner and practitioner |
| Revitalization plan for domestic tourists | 1. Subsidizing program for domestic travel | February 13, 2020 | Encouraging Taiwan residents to engage in domestic travel by providing a partial allowance for promoting the travel, tourism, and hospitality industry.                                                                                                                  | 2,000                             | Taiwan residents            |
|                             | 2. Promoting program for developing domestic travel |                | Cross-regional cooperation of tourism associations for creating an innovative tourism theme, entertainment, or environment.                                                                                                                                   | 400                               | Tourist attractions         |
|                             | 3. Subsidizing program for shaping an attractive spot by highlighting local events |                | Encouraging local characteristic developments such as “Old Town” tour, local cuisine street, ecological trail sightseeing, night market, or New Year activities.                                                                                                    | 300                               | Tourist attractions and hospitality industries |
|                             | 4. Subsidizing and branding program for hot spring spot travel and lodge. |                | Subsidizing to operators for upgrading the accommodation facilities in the hot spring area which motivates domestic travel intention and behavior.                                                                                                               | 200                               | Business owner and Taiwan residents |
| Revitalization plan to incentive international inbound tourists | 1. Welcome program for international cruise | February 13, 2020 | Providing partial harbor waiver fees for international cruise visits; at the same time, the travel agencies who arrange for Taiwan as a home port or a turnaround port will be awarded a bonus.                                                                                         | 70                                | Inbound visitors and travel agency |

(continued)
| Schemes | Practices/programs | Issue date       | Contents                                                                                                                                                                                                 | Provisional budget (millions NTD) | Objective               |
|---------|-------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------|
| Upgrading plan of tourist attractions | 1. Upgrading program for enhancing the quality of the hospitality industry | February 13, 2020 | Upgrade the facility quality of the travel, tourism, and hospitality industry (such as barrier-free facilities and Muslim-friendly environment)                                                                 | 400                               | Hospitality industry    |
|         | 2. Upgrading program for amusement business |                      | Subsidized for facilities, and digital hardware upgrades and innovative services of the amusement business.                                                                                                  | 300                               | Amusement business      |
|         | 3. Digital service program                        |                      | With the assistance of the government to help the tourism businesses to transform digitally by providing online booking and lodging service.                                                              | 200                               | Business owner          |
| Long-term plan | Build international scenic spots; travel-themed program; smart tourism | February 13, 2020 | 1. To build a friendly environment, including tourism information, hardware construction upgrade, and service quality to match international standards. 2. A national upgrade plan for tourist railway routes, buses, and stations. 3. The comprehensive smart tourism and digital transformation program. | 30,000                            | Upgrade infrastructure  |

Note: The information sources are based on the major policies of Executive Yuan and the Schemes of Ministry of transportation and communications, R.O.C. [https://www.ey.gov.tw/Page/448DE008087A1971/46e8b1b8-3758-4732-8f15-d2254bf9ee4d](https://www.ey.gov.tw/Page/448DE008087A1971/46e8b1b8-3758-4732-8f15-d2254bf9ee4d). DMO = destination marketing organization.
of data in this study (triangulation between secondary data, interview with business owners, and observation of day-to-day operations) allowed researchers to identify effective government measures to support hotel and restaurant business which are presented below.

**Quarantine Hotel Program**

To prevent the spread of Covid-19 virus through incoming travelers, Taiwan government has introduced “Quarantine regulations” which require incoming persons to stay at home and self-quarantine for 14 days and not take public transportation and use private or rental car. Taiwan government quarantine hotel program is driven by the demand for effective joint work between business owners and health care professional to effectively manage Covid-19 virus and support hotel owners during crisis situation.

The government has developed an online application procedure for hotel owners interested to become quarantine hotel (see Table 6). During the application process, priority is given to the hotel business owners with detached buildings and willingness to reveal their name (Y. Chen, 2020). With the rising number of people subject to quarantine measure during Covid-19 pandemic, becoming an authorized quarantine hotel is a way to save business for many hotel owners. Program proves to be effective in helping hotel business owners during Covid-19 pandemic, with 10 hotels in Taipei (820 rooms) joining program in February (Huang, 2020) and 24 quarantine hotels registered in Taipei in June 2020 (Taipei City Government, 2020). Since February, quarantine hotel program has allowed 6,000 hotel rooms to be transformed into a legal quarantine hotel across the country due to government incentive policy (Wei-ting, Ming-hsuan, et al., 2020); 30% of the quarantine rooms have been used, bringing economic benefits for the business. People required to self-quarantine (incoming travelers and relatives of people subject to isolation) are encouraged by the government to stay in the designated quarantine hotels by provision of NT$2,500 (US$83) as a daily subsidy (Huang, 2020). With the aim to avoid the spread of the Covid-19 pandemic and to revitalize the catering industry, especially small businesses, Taiwan government, the Ministry of Economic Affairs has introduced subsidizing program for food delivery services. Food businesses willing to join this relief program had to sign a contract with one of the listed delivery service companies, such as Yowoo Delivery, Cutaway, Foodomo, Inline, and GBG Express (Hua-Sheng Hu, 2020). According to this supporting program, eligible delivery service companies apply for reimbursement from government, reducing the administrative procedures and costs of the catering industry (Executive Yuan, 2020). Government has allocated NT$160 million (US$5.29 million) to subsidizing food delivery fees for about 11,000 small restaurants, capped at NT$15,000 for each restaurant (L. Wang, 2020). This program has connected food businesses with delivery service companies and helped restaurants to maintain their business operations during the crisis. This has also proved popular among residents due to its convenience and reduced costs. However, as of May 2020, the biggest two delivery companies—Foodpanda and UberEats—still have not joined this food delivery service (NewTalk, 2020).

**Face Mask Rationing**

New regulation also required all service industries and the first-line hospitality staff members, including staff, food and service providers, and even vendors who deal with customers to wear face masks to prevent the spread of the pandemic (Wei-ting et al., 2020). To support general public and hospitality businesses during the face masks deficit, government has taken several approaches, including readjusting the production line, using government funds, military personnel, and private company facilities to increase mask production (C. J. Wang et al., 2020), which turned Taiwan into the second-largest face mask supplier in the world (TAITRA, 2020).
For general public, the online masks ordering mechanism, the name-based rationing system has been developed through the cooperation of the government and private sector retailers, which allowed people to order masks in person or through the digital apps that made it easier to receive masks and avoid crowds (TCDC, 2020a). Tourism and hospitality businesses were supplied with face masks through local associations. Interviews have revealed that business owners could weekly receive masks for the employees through local restaurant or hotel association.

Responders have described a key strength of government face masks supply during the Covid-19 pandemic as highly important. As one of the respondents puts it, "Access for facial masks became necessary to run the business. Face masks and hand alcohol are precious commodity during the Covid-19 pandemic. We asked employees to wear masks and measure body temperature according to government recommendations. We also perform temperature measurement and hand disinfection for customers."

Table 6. Guidelines: Installation and Management of Quarantine Hotel.

| Guidelines                        | Items                                                                 | Contents                                                                 |
|-----------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------|
| Fundamental equipment and measures| 1.                                                                  | A single building or a separate floor is better to avoid the people’s contact opportunity. |
|                                   | 2.                                                                  | Hotel gates, counters, elevator entrances, various floors, and so on must be equipped with 75% alcohol to facilitate hand disinfection. Using the induction type controllers is encouraged to avoid any contact. |
|                                   | 3.                                                                  | The entrance sets up a human body temperature measuring station.        |
|                                   | 4.                                                                  | One person one room principle. If needed an accompanying caregiver, such as infants, elderly people, one caregiver only be allowed who need to mask inside the room. |
|                                   | 5.                                                                  | Meals are delivered to the door by the staff.                          |
|                                   | 6.                                                                  | Providing daily necessities, including cleaning supplies, bedding, and others. |
|                                   | 7.                                                                  | All relevant fire protection regulations must be strictly observed.     |
| Room requirements                  | 1.                                                                  | Independent toilet and air-conditioning equipment with the open windows. |
|                                   | 2.                                                                  | Communication device: such as a telephone.                              |
|                                   | 3.                                                                  | Entertainment devices: such as networks, TV, and audiovisual devices.    |
|                                   | 4.                                                                  | All remote controls, touch panels for air conditioning, or TV should be covered and protected by a protective film, and replaced once checked out. |
|                                   | 5.                                                                  | Using disposable products such as cleaning supplies, tableware, and other disposable consumables. |
|                                   | 6.                                                                  | Handwashing liquid, soap, and 75% of alcohol should be provided in the room to clean the hands at any time. |
| Environmental cleaning and waste disposal | 1.                                                                 | The cleaning of the environment in public areas shall be cleaned by the staff at least once a day; the cleaning in the room shall be handled by the quarantined-self. |
|                                   | 2.                                                                  | The room waste disposal is cleaned and tied up within garbage bags by the quarantined personnel and placed outside the door, and then handled by the staff. |
|                                   | 3.                                                                  | Replacement (such as towels, blankets, toothpaste, shampoo, shower gel, etc.) can be packed in plastic bags, tied up by the home quarantine and placed outside the door, and then handled by the staff. |
|                                   | 4.                                                                  | When any other needs or troubleshooting should use a phone call.        |
|                                   | 5.                                                                  | Food waste is not recycled and is treated as waste disposal.            |
|                                   | 6.                                                                  | All cleaners need hygiene education before working to avoid pollution caused by waste disposal. |
|                                   | 7.                                                                  | The room cannot be reused before completing disinfection. The disinfection procedures should follow the rules of these regulations. |
| Staff health management            | 1.                                                                  | Staff health monitoring practice, if staff have a fever (ear temperature >38°C; forehead temperature >37.5°C), respiratory symptoms, and so on, they should report to the supervisor and take appropriate protective measures and medical treatment. |
|                                   | 2.                                                                  | All staff wear masks throughout the work                                |
|                                   | 3.                                                                  | Staff with the suspected symptoms must immediately notify the health unit and sent to the hospital. After that, the epidemic investigations are conducted and the preventive measures are proceeded. |
|                                   | 4.                                                                  | Formulating the leave rules and human resource backup plans, the staff takes leave at home due to certain or suspected infection with Covid-19, which should be considered as attendance with the full payment. |

Note. The information sources are based on the regulations of “COVID-19 Pandemic” Response Guidelines: installation and management of quarantine hotel, Taiwan Centers for Disease Control. https://www.cdc.gov.tw/Category/MPage/_afAfKlDIk9aNpDdg_36lg (Accessed: 4/June/2020).
Business owners see these virus preventive measures as depicting their new values to strengthen public health, involving Corporate Social Responsibility (CSR), as well as shaping their brand image. Bed and breakfast business owner: “The disinfection of the rooms and public areas, as well as the wearing of masks by all employees, can best win the trust of customers during the outbreak.”

Discussion and Implications
Taiwan’s success to minimize the spread of Covid-19 and controlling the situation, in comparison with other countries, helped to reduce unprecedented economic damage and losses, especially in tourism and hospitality industry. This case study describes the impact of Covid-19 pandemic on tourism and hospitality sector in Taiwan, which put on hold the majority of in-bound and outbound travelers, and presents the analyses of government response measures supporting business owners. Findings of the research present original and effective practices and cooperation modes with tourism and hospitality businesses to reduce the impact of Covid-19 pandemic. Novel measures and practices presented in this article highlight dependency between effectiveness of the undertaken measures and collaborative efforts among all stakeholders including (but not limited to) government, local tourism and hospitality associations, businesses, mass media, and members of the public. This case study helps to understand evolving practices during a crisis and provide policy makers, hotel managers, owners, and other stakeholder’s insights into what measures and practices can be beneficial for tourism and hospitality industry during a crisis, such as Covid-19 pandemic.

While this research is not without its limitations, as Covid-19 response measures described here are based on a single country case study, nevertheless, it provides useful guideline for policymakers, tourism and hospitality business owners, and managers. This study is one of the first to explore the evolving phenomenon of virus pandemic effect on tourism and hospitality operations and suggests priorities for future research. Differences in countries’ institutional arrangements and economic and demographic situation affect a range of measures undertaken and their effectiveness. Authors acknowledge that more work needs to be done to examine government industry relationship in greater depth in a broader area. In addition, further research may examine the effect of business owners and managers’ motivations, the influence of their trust in government programs on their decision-making processes with respect to joining short- and long-term collaboration, and their levels of satisfaction. Profiling the businesses who join relief and revitalizing programs could be useful for the development of policies and practices meeting tourism and hospitality business owners’ needs and wants during a crisis.

Conclusion and Limitations
The authors acknowledge that this case study has several limitations. First, due to the short period of time between government policies and their follow-up results, it is difficult to make conclusive inferences about an effective policy. Sometimes, a long period of observation is required to determine the effective results. Therefore, consecutive observation is encouraged to provide robust supplementary evidence. This study motivates research agenda that seeks to understand fundamental aspect of short- and long-term institutional responses benefiting tourism and hospitality business sustainability. Future studies can analyze more sectors of the hospitality industry (e.g., airline, and travel agencies) in Taiwan as well as other countries, which would make an academic contribution but also benefit managers in all sectors of the hospitality industry, investors, and government officials facing new outbreaks of disease.

Acknowledgments
We thank the companies’ owners, management, and employees who kindly provided their time for interviews, shared their insight, and have provided access for observations of their day-to-day operations, all of which has greatly assisted this research.

Declaration of Conflicting Interests
The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding
The author(s) received no financial support for the research and/or authorship of this article.

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