Tourism and COVID-19 in China: recovery and resilience strategies of main Chinese tourism cities

Luqi Yang, Xiaoni Li and Ana Beatriz Hernández-Lara

Abstract

Purpose – *The purpose of this study is to investigate the recovery and resilience tourism strategies and possible future development of four main Chinese tourism cities.*

Design/methodology/approach – *The authors collected data from the official accounts of tourism administrations of these cities, tourist attractions and opinions from media and newspapers in Sina Weibo platform. The authors adopted an inductive approach in observing relevant social media posts and applied content analysis to identify main China's tourism prevention and recovery strategies.*

Findings – *During the mass pandemic infection period, top-down prevention and control measures were implemented by the Chinese central and local governments, with feasible and regional recovery policies and protocols being adapted according to local situations. Measures related to tourism industrial re-employment, improvement of international images and governmental financial supports to re-boost local tourism in Chinese cities were paid great attention. Digitalization, close-to-nature and cultural heritages became important factors in the future development of China's tourism. Dark tourism, as a potential tourism recovery strategy, also obtained huge emergence, for the memory of people deceased in the pandemic and for the inheritance of national patriotism.*

Originality/value – *This study enriches the current literature in urban tourism recovery studies analyzing the specific case of Chinese tourism cities and fulfill some voids of previous research mostly focused on the first wave of the pandemic and the recovery strategies mainly of Western cities. It also provides valuable suggestions to tourism practitioners, destinations and urban cities in dealing with regional tourism recession and finding possible solutions for the scenario associated to the COVID-19 and other similar health crisis.*

Keywords Chinese tourism cities, Recovery and resilience strategies, Prevention and control measures, Social media, Dark tourism, Sustainable development, COVID-19

Paper type Research paper

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1. Introduction

The COVID-19 pandemic has brought devastating effects to the global tourism industry. As reported by the UNWTO (2022), in 2021 international arrivals were 72% below the pre-pandemic year of 2019, being also expected that the total recovery could not be achieved until 2024 or beyond. The long-term negative impacts of COVID-19 on the global tourism aroused a lot of discussion on prevention measures, for instance, strict isolation and PCR testing (Nagai & Kurahashi, 2022), and appealed to the construction of public health infrastructure (e.g. contact tracking, sanitation, distancing) (Vărzaru, Bocean, & Cazacu, 2021). These COVID-19 prevention measures were used to control the disease, but also provoked the reduction of tourism arrivals and revenues (Nagai & Kurahashi, 2022), calling for the need of developing tourism recovery research and plans. This objective would demand the conjoint efforts from all, regional and local governments and tourism companies, in the enhancement of financial stimulus for releasing short economic burden, and stabilizing long-term tourism employment,

destination branding and a better preparedness for the health crisis management (Knight, Xiong, Lan, & Gong, 2020; Pasquinelli, Trunfio, Bellini, & Rossi, 2022; Vărzaru, Bocean, & Cazacu, 2021).

This global awareness on the need of tourism recovery and resilience protocols emerged also at a country level. In the specific case of China, this country has been recognized by its rapid COVID-19 mitigation responses and tourism recovery (McCartney, 2020). Since the outbreak of the global crisis, multiple strategies were adopted, giving response to the different stages of domestic pandemic, including strict transmission tracing and targeting regional policies in the face of small-scaled spreading (Cheng *et al.*, 2021). Under the gradual control of COVID-19 in China, we witnessed a huge increment of new tourism products such as family, independent tours, wellness and personalized traveling in nature areas (Huang, Shao, Zeng, Liu, & Li, 2021), as well as the utilization of digital technologies in the enrichment of tourist experiences (Lu *et al.*, 2021). As a consequence, tourism industry in China is expected in 2022 to recover to 70% of the pre-pandemic level (Yang, 2022), revealing the relevance of analyzing the specific case of China's prevention measures and recovery strategies.

Going down to a regional and local perspective, we found tourism studies that highlighted prevention policy implementations, e.g. in the case of Macao region (China), Hongkong city (China) and Can Tho city (Vietnam), emphasizing the governmental support in mobility supervision, disinfection, distancing, etc. (Im, Lam, & Ma, 2021; Huynh, Duong, Truong, & Nguyen, 2022; Yu *et al.*, 2021). However, these prevention measures referred to the first wave and recovery stage (Im, Lam, & Ma, 2021; Yu *et al.*, 2021), mainly during 2020 which might be considered outdated, because the pandemic covers a longer period with different intensity in its multiple stages that may demand different responses. In addition, most of these policies proved ineffective due to the delayed local application (Huynh, Duong, Truong, & Nguyen, 2022). Also, previous studies in tourism recovery research on tourism cities mainly shed light on the construction of sustainable city branding and responsibility, especially in European destinations and Australian cities (Bosone, Nocca, & Fusco Girard, 2021; Jiricka-Pürrer, Brandenburg, & Pröbstl-Haider, 2021; Kowalczyk-Aniol, Grochowicz, & Pawlusinski, 2021; Pasquinelli, Trunfio, Bellini, & Rossi, 2022), being scarcer the studies carried out on Chinese cities and destinations.

To overcome these voids, we chose the main China's tourism cities as research targets and identified the following objectives:

■ to investigate prevention measures of China's main tourism cities – Wuhan, Beijing, Shanghai and Guangzhou; and

■ to identify the recovery strategies and new trends of local tourism developments of these cities.

Compared with previous research on prevention policies, this study proposes to expand the timespan of China's pandemic diffusion to the second and third wave – from January 2020 to September 2021, which contributes to a more completed view of the whole phenomenon under investigation, and it is beneficial for identifying the changes of local tourism strategies. In addition, the focus of this study on China's tourism resilience and recovery protocols brings a more holistic review that complements and enriches this line of research on global tourism recovery – comparing China with other Western tourism cities and destinations.

2. Literature review

2.1 Prevention measures under the pandemic backdrops

Ever since the outbreak of COVID-19, scholars worldwide have emphasized the importance of the pandemic prevention measures. Previous studies illustrated the need of conjoint efforts from governments, health professionals and local communities in the construction of open communications, public health infrastructures and capabilities to provide in-time

response and measures in dealing with global health emergencies. These measures included testing, sanitation, social distancing and mobility tracing (Qiao, Zhao, Xin, & Kim, 2021; Vărzaru, Bocean, & Cazacu, 2021; Villacé-Molinero, Fernández-Muñoz, Orea-Giner, & Fuentes-Moraleda, 2021).

Prevention measures applied at a local level by tourism cities or regions were also analyzed. In the specific case of China, Im, Lam, & Ma (2021) emphasized the prevention measures applied in Macao region, which included strict mobility restrictions, guarantee of mask supply, quarantine measures, disinfection of hotels and public places and cancellation of big events. Similarly, Yu *et al.* (2021) advocated the utilization of digital passenger contact tracing and strong nonpharmaceutical preventions, especially in controlling the pandemic diffusion brought by international travels in the case of Hongkong city. Out of China, Huynh, Duong, Truong, & Nguyen (2022) analyzed Can Tho city (Vietnam) and concluded the relevance of proper crisis preparedness, proactive and adaptive management over the global pandemic, after observing the negative effects of the overload of healthcare system and ineffective governmental response in some waves during the pandemic.

We conclude that the studies on the prevention measures applied in tourism cities are quite scant, and that they mostly concentrated in a limited time span, basically during the first wave and the corresponding recovery stage. As a consequence, this paper aims to fulfill this gap, by not only expanding the research timespan – including both the first and second wave of China's pandemic expansion with their corresponding recovery stages, and the third wave of expansion – but also extending the scope of the research targets to four main China's mega tourism cities – Wuhan, Beijing, Shanghai and Guangzhou, so as to bring about a more complete view of the pandemic prevention response at a local level and its changes during different phases of the health crisis.

2.2 Tourism recovery strategies and protocols in a pandemic scenario

Worldwide researchers and tourism practitioners also paid attention to the recovery and achievement of a robust tourism growth in the pandemic scenario. With this objective, some measures were applied by governments as financial supports and tax reduction, the release of short-term financial burdens and fostering the improvement of crisis management abilities, flexible employment and development of recovery protocols and plans in the long-term (Knight, Xiong, Lan, & Gong, 2020; Vărzaru, Bocean, & Cazacu, 2021). From the corporate perspective, main concerns were raised in the promotion of local destination image and recovery of customer confidences, which required a more effective customer relationship management, e.g. effective communication and refund policies (Liu, Fu, Hua, & Li, 2021a), and sustainable destination management in correspondence with changeable tourist cultural identity and travel preferences, e.g. high-quality personalized products in wellness, outdoor tourism (Neuman, Chelleri, & Schuetze, 2021; Huang, Shao, Zeng, Liu, & Li, 2021) and promotion of virtual experiences (Lu *et al.*, 2021).

The resilience of the tourism industry, and especially in the case of tourism cities, emphasized the focus on a sustainable development perspective. On the one hand, some solutions were around the counterbalance of historical cultural resource preservation and the establishment of city branding under the sustenance of modern technologies. For instance, Naples (Italy) and Kraków (Poland) both launched digital tours of local cultural attractions with the aims to provide immersive customer experiences, cultural identity and reservation of local heritages in the avoidance of over-tourism and COVID-19 transmissions (Bosone, Nocca, & Fusco Girard, 2021; Kowalczyk-Aniol, Grochowicz, & Pawlusinski, 2021). In addition, Macao region (China) devoted its efforts to tourism management, by embracing both governmental financial stimulus for the survival of local tourism enterprises, consumptions and regional technological collaborations in the enhancement of local cultural authenticity and branding (Liu, Wang, McCartney, & Wong, 2021b).

On the other hand, many European and Oceanian countries focused on the establishment of transformative and sustainable cities, promoting for example local green spaces and suburban areas, under the premise of orienting the traveling preferences towards domestic, outdoor, fresh environments (Liang, Leng, Yuan, & Yuan, 2021). The development of sustainable cities also involved the enhancement of city responsibility in combining green initiatives, technological innovation, resource management and mitigation of local conflicts together for the better preparedness of future tourism crises (Jiricka-Pürrer, Brandenburg, & Pröbstl-Haider, 2021; Pasquinelli, Trunfio, Bellini, & Rossi, 2022).

The last trend identified in previous studies on recovery strategies of the tourism industry from a local perspective considered the use of the pandemic as an opportunity to foster the sector (Zhang, 2021). There was a research line on dark tourism that uses historical disasters as a resource to boost tourism. It was the case of worldwide popular dark tourism sites that offer full cultural attractiveness to tourists (Lewis, Schrier, & Xu, 2021) and educational significances in the enhancement of human identities (Qian, Zhang, Zhang, & Zheng, 2017; Wang, Shen, Zheng, Wu, & Cao, 2021), taking profit of a strong marketing orientation in the establishment of authentic customer experiences and sense of belonging (Boateng, Okoe, & Hinson, 2018; Powell, Kennell, & Barton, 2018). In the specific case of the COVID-19 pandemic, Wuhan city has become a recognized destination of dark tourism because of its successful survival in the anti-pandemic campaigns in recent years (Stone, 2021).

This revision emphasizes the significance in the understanding of tourism cities' recovery strategies worldwide in the pandemic scenario, and the opportunity that it offers as a means to explore possible solutions to foster tourism recovery and development opportunities. In this dimension, we have found an absence of discussion over China's tourism recovery and resilience, which could be supplemented by this study, in the special case of China's tourism cities – Wuhan, Beijing, Shanghai and Guangzhou, with the aims to enrich current state of the art, discover new tourism growth potentials and better preparedness for tourism urban city survivals in the face of global health diseases.

3. Methodology

3.1 Data collection

We chose main mega tourism cities of China – Shanghai, Beijing and Guangzhou, as research targets to fulfill our objectives because of the following reasons. Shanghai, as the center of technology, innovation, trade and finance of China (Deng, Liu, Dai, & Li, 2019), has become a well-known international metropolis and famous tourist destination (Mou et al., 2020). Beijing, the capital and political heart of China, endowed with a long history of over 3,000 years and rich cultural heritages (Zhang, Chen, & Li, 2019). Guangzhou – as the largest trade center of South China (Huang, 2021), has attracted thousands of worldwide and domestic tourists as a "shopping paradise" and city with worldwide tourist attractions (Yang & Zhang, 2020). We also embraced the study of Wuhan – as the origin of the first confirmed COVID-19 case. It has also obtained high worldwide reputation due to quick response, control over the pandemic and rapid recovery of local tourism and consumption from the health emergency (Wang, Li, & Zhang, 2022).

Data were collected using Sina Weibo, as one of the biggest micro-blogging platforms in China, which has been widely used by Chinese people to share their thoughts and interact with others due to its convenience in posting and retweeting online texts, pictures and videos. Sina Weibo platform was previously applied to conduct research on destination marketing strategies (Yang, Ruan, Huang, Lan, & Wang, 2021) and the solution of online complaints (Liu, Fu, Hua, & Li, 2021a).

Sina Weibo accounts considered in our research belonged to the local tourism administrations, tourist attractions and newspapers. We combined the tourist attraction ranking in Trip.com (Trip.com, 2022) – one of the biggest travel agencies in China, by selecting top attractions with over

4.5/5 scores, including local museums [Wuhan Revolution Museum, Shanghai Museum, The Palace Museum (Beijing) and Guangdong Museum (Guangzhou)], scenic spots [Yellow Crane Tower (Wuhan), The Summer Palace (Beijing), The Canton Tower], resorts (Guangzhou Chimelong Tourist Resort, Shanghai Disney Resort), etc. Some local newspapers with over one million followers were chosen as targets including Eastday.com (Shanghai), WuhanChina.com, BeijingDaily.com and GuangzhouDaily.com.

In the next stage, we applied the advanced searching function of Sina Weibo, by refining the keywords of "tourism + COVID-19," timespan as January 1, 2020 – September 16, 2021; and used the searching in all the three types of accounts we chose (Figure 1). We supplemented the keywords to "tourism + COVID-19 + Shanghai/Wuhan/Beijing/Guangzhou" when we retrieved the information from local newspaper so as to make sure the relevant data are refined within the scopes of these four chosen cities. We chose Goo seeker – an online data scraping platform to export all the relevant data – tourism accounts, post time, topic, content, etc., and downloaded a total of 1,889 posts. We looked through all the data; removed the

Figure 1 Data collection and analytical process
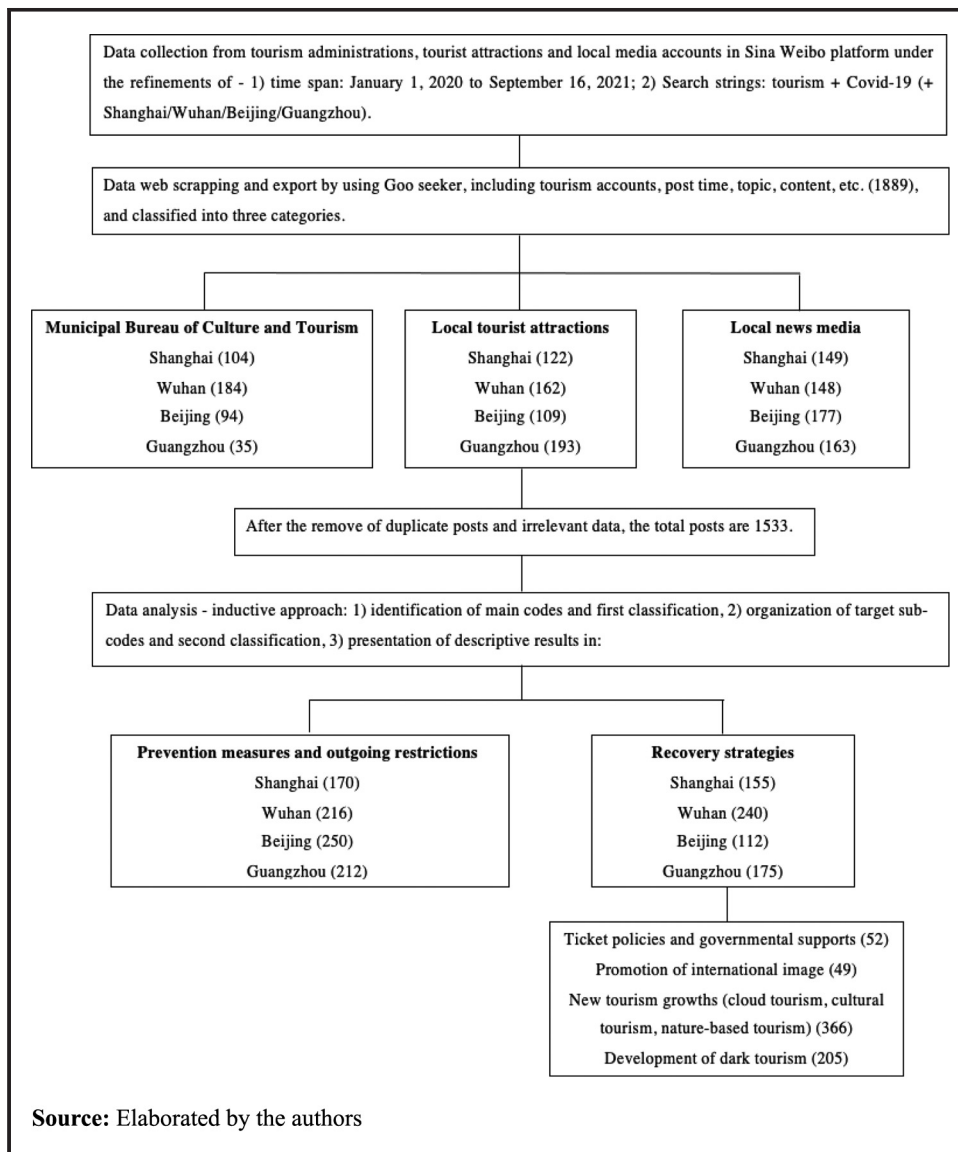
Source: Elaborated by the authors

duplicates and the irrelevant data without the pandemic discussions. In total, we obtained 1,533 valuable posts.

3.2 Data analysis

We adopted an inductive approach, rooted in the observation of the phenomenon (Brotherton, 2015). During the analysis, the main researcher reviewed the sample to become familiar with the data. Frequently occurring features – COVID-19 prevention and China's tourism recovery strategies were identified as main codes. The other co-authors reviewed the initial codification and provided a holistic input on the codebook. In an iterative and reflexive process, the main researcher applied the coding strategy to all posts according to the coding framework established in the code identification process and categorized four subcategories as ticket policy and financial supports, international image, tourism growths and the development of dark tourism. The codification was discussed among all the coders until broad consensus was reached. Finally, we discussed the contents in each category and subcategory, refined them and elaborated the results.

4. Results

4.1 Prevention measures and outgoing restrictions

Regarding China's prevention and outgoing restrictions, five stages of the pandemic expansion in mainland China were formalized (Wikipedia, 2021): the first wave (2019.12–2020.3) and recovery stage (2020.3–2020.11), the second wave (2020.12–2021.2) and recovery stage (2021.3–2021.6) and the third wave (2021.7–2021.8). Each stage embraced the discussion over both domestic and cross-border prevention information and outgoing restraints (Table 1). It was found that general instructions over COVID-19 prevention and control policies were imposed by the central government of China. During the different stages, flexible regional policies were further organized by the Ministry of Culture and Tourism and implemented by the tourism cities, according to the situation of local COVID-19 expansion and travel mobilities.

4.1.1 The first wave (2019.12–2020.3) and recovery stage (2020.3–2020.11). Ever since the outbreak, the Ministry of Culture and Tourism of China already recommended a series of prevention measures including the close of travel agencies and careful control over tourism flow. By March 2020, domestic tourist attractions in low-infected regions were allowed to reopen under the consideration of actual situation of local pandemic. However, Wuhan, Beijing, Shanghai and Guangzhou all conducted strict pandemic control, through closing main tourist attractions, activities and inputting tourist entrance temperature testing, reservation, regular cleaning and disinfection (Table 1, No. 1). By the middle of April 2020, a gradual recovery of China's outdoor scenic spots, tourist attractions and entertainment places appeared, refined with 30% of daily customer entrance limits (Table 1, No. 1). In May 2020, domestic restrictions were further released, through the overall reopen of hotels, restaurants, shopping malls and adjusting capacity of scenic spots and entertainment places from 30% to 50% (Table 1, No. 2). By September 2020, the domestic daily number of passenger entrance into scenic spots were expanded to 75%, with the overall reopening of both indoor and outdoor activities (Table 1, No 3).

In terms of traveling, foreigner entry into China was suspended in this stage (Table 1, No. 8). In January 2020, Beijing and Wuhan also strengthened local outgoing control, with either suspending all the interprovincial passenger transports or improving local mobility supervision (Table 1, No. 9). The recovery of interprovincial travels and "hotel + ticket" services in the low-infected areas appeared in July 2020 (Table 1, No. 10). Beijing, Wuhan and Shanghai strongly recommended the citizens to choose staggered peak travels and strict obey to the prevention measures during Dragon Boat Festival in June and the summer holidays (Table 1, No. 11).

Prevention measures and outgoing restrictions of China's main tourism cities

Classification	No.	Examples of posts	Key content	User
Prevention measures	1	" . . . tourist attractions should establish reservation system . . . enter the park at intervals . . . do a good job in the registration of tourist information . . . " " . . . the opening of scenic spots should not engage in "one size fits all" . . . " . . . on April 13 . . . only outdoor areas are open to tourist attractions . . . tourists received shall not exceed 30% of the maximum carrying capacity . . . "	Tourist entrance examination	Ministry of culture and Tourism
	2	" . . . fully open shopping malls, supermarkets, hotels, restaurants . . . take current restrictions to open parks, scenic spots . . . entertainment places limit the flow of consumers . . . not exceed 50% . . . "	Gradual recovery of tourism activities	
	3	" . . . tourists received by the scenic spot . . . spectators in theaters . . . should not exceed 75% of the maximum carrying capacity . . . "	Release of entrance carrying capacity	
	4	" . . . during the Spring Festival, we call for the reduction of mobility, travel, gatherings, and advocate people to spend the festival at where they work . . . "	Spring festival "stay-put"	
	5	" . . . no longer a unified limit on the proportion of the number of people in entertainment venues in low-risk areas . . . " " . . . Beijing will resume cultural and sports tourism activities . . . open parks, scenic spots, scenic spots and historical sites according to 75% of the current limit . . . " " . . . Shanghai's theaters, Internet service and entertainment venues should be open . . . visitors to museums and art galleries are no longer subject to a unified limit but shall not exceed the approved maximum capacity . . . "	Flexible control policy	Ministry of culture and Tourism and media (Beijing, Shanghai)
	6	" . . . tourism venues in the medium and high-risk areas of Guangzhou are all closed . . . entertainment venues, museums, art galleries . . . should close in other areas . . . outdoor parts of tourist attractions are limited to 50%. . ."	Pandemic management in Guangzhou	Municipal bureau of Culture and Tourism (Guangzhou)
	7	" . . . we will strengthen the defense line of "internal non-proliferation and external anti-import", strictly prevent the spread of the pandemic through cultural and tourism channels . . . "	Overall strict pandemic control	Ministry of Culture and Tourism
Outgoing restrictions	8	" . . . China has decided to temporarily suspend the entry of foreigners with valid Chinese visas on March 28, 2020 . . . "	Suspension of international travel	Media (Beijing)
	9	" . . . inter-provincial passenger transport and tourist-chartered vehicles entering and leaving Beijing will be suspended . . . " " . . . Wuhan City has strengthened the control of people entering and leaving Wuhan . . . . random inspections of private vehicles . . . check whether live birds, wild animals, etc. are carried . . . "	Suspension of inter-provincial travel	Media (Beijing, Wuhan)
	10	"On July 14 . . . travel agencies and online travel companies can resume operating inter-provincial team travel and "air ticket + hotel" business, except medium and high-risk areas . . . "	Resumption of inter-provincial travel	Media (Shanghai)
	11	" . . . the general public go on staggered peak travel . . . " " . . . . the Dragon Boat Festival holiday is the first	Festival outgoing tips	Municipal bureaus of Culture and

Table 1

Classification	No.	Examples of posts	Key content	User
	12	holiday after Beijing's emergency response level raised . . . adhere to 'limited, appointment, staggered peak' . . . travel prudently . . . " " . . . at the peak of summer travel . . . Shanghai citizens should choose their travel destinations carefully . . . take personal protection, maintain proper social distance, travel safely . . . " " . . . is the peak tourist season in the summer vacation . . . people in high-risk areas should cancel their travel . . . people from other areas should carefully check the pandemic risk situation of the travel destination before traveling . . . "	Festival outgoing tips	Tourism (Wuhan, Beijing, Shanghai) Ministry of culture And tourism
Source: Elaborated by the authors				

4.1.2 The second wave and recovery stage (2020.12–2021.6) and the third wave (2021.7–2021.8). In the second wave, the Ministry of Culture and Tourism of China advocated "stay-put" policy (Xinhua, 2021) to encourage people to celebrate the Spring Festival at where they worked or lived to reduce domestic personnel mobility (Table 1, No. 4), opening at the same time many tourist attractions to satisfy the citizens' expectations during the festival. The Ministry of Cultural and Tourism of China adapted the control policy, under the consideration of local tourism flow and pandemic situation in March 2021. For instance, tourism in Beijing and Shanghai obtained rapid recovery – the former stressing the carrying limits of outdoor recreations to 75%, and the latter advocating a non-unified regulation of local scenic spot and entertainment place visits, within the maximum carrying capacity (Table 1, No. 5). In May 2021, regional mass infections reoccurred in Guangzhou, provoking the forbidden of indoor dining and close of entertainment places in highly infected districts (Guo, 2021). Partial Guangzhou's tourist attractions in low-infected areas could be open under a 50% limitation of the total holding capacity (Table 1, No. 6).

The third wave started with the regional pandemic diffusion in Yunnan Province in July 2021, when the central government imposed strict prevention and outgoing control over all the country, as a national priority – involving reclose of partial scenic spots, strict control tourist entrance and public place disinfection (Table 1, No. 7). Moreover, the Ministry of Culture and Tourism of China advocated several outgoing suggestions – especially high attention to self-protection during travels (Table 1, No. 12). By the end of August 2021, scenic spots were steadily reopened, which might indicate the next stage of the pandemic.

4.2 Recovery strategies

Among the recovery strategies of China's tourism cities, four aspects were categorized, including ticket policies and governmental financial supports, promotion of international image, new types of local tourism – cloud, culture and rural tourism and the development of China's dark tourism. Tables 2 and 3 summarized the results.

4.2.1 Ticket policies and financial supports. In the face of the halt of domestic tourism, ticket policies were launched by local tourism administrations and tourist attractions. Full-refund and discount policies were provided by local tourist attractions to maintain the trustfulness from the customers (Table 2, No. 1). Beijing Municipal Bureau of Culture and Tourism opened the "legal consultation line" for citizens and travelers involved in withdrawal and refund disputes with travel agencies (Table 2, No. 2). The National Ministry of Finance of China introduced financial supports by March 2020, which were managed in different ways in each city. Wuhan and Guangzhou chose to stabilize local employment by launching

Table 2	Recovery strategies of China's main tourism cities			
Classification	No.	Examples of posts	Key content	User
Ticket policy	1	" . . . Wuhan Tourism Benefit Vouchers distributed to Wuhan citizens and tourists . . ." " . . . from January 23rd, Wuhan Happy Valley will be temporarily closed. . .Visitors who have booked tickets online can apply for a full refund . . . " " . . . fans can apply for a refund for tickets that have not been written off . . . you can use the same discount to buy the [new Zhu Yilong fan exclusive ticket] . . . " " . . . tickets that have already been purchased for Canton Tower can be fully refunded[. . .]"	Ticket refund, discount and vouchers	Municipal Bureau of Culture and Tourism (Wuhan) Tourist attraction (Wuhan, Shanghai, Guangzhou)
	2	" . . . '12345 legal consultation service line' is opened for citizens involved in travel agency withdrawal and refund disputes during the pandemic[. . .]"	Complaint consultant	Municipal Bureau of Culture and Tourism (Beijing)
Financial supports	3	" . . . from July 23, Wuhan has vigorously promoted 'Hundred Days Action to Stabilize Posts with Training' . . . subsidized funds can be used to issue wage subsidies and living allowances for employees . . . " " . . . subsidies for work-based training in Guangzhou will continue . . . "	Employment stabilization	Media (Wuhan, Guangzhou)
	4	" . . . the Municipal Finance Bureau of Beijing has worked with cultural and tourism departments to pass the budget . . . to ensure tourism exhibitions, overseas tourism promotion, tourism market management . . ." " . . . funds will focus on supporting Shanghai cultural enterprises . . . more attentions to the fields of audio-visual, cultural consumption, e-sports . . . "	Competitiveness enhancement	Media (Beijing, Shanghai)
Promotion of international image	5	" . . . the 7th Beijing Wangfujing International Brand Festival officially opened . . . to display the phased achievements of Wangfujing's transformation and consumption upgrading . . . " "[When foreigners in China travel to Wuhan . . .] . . . this is my fourth visit to Wuhan, and my first visit to Wuhan after the pandemic . . . I admire the city of Wuhan, which is very safe and prosperous . . . "	Transmission of rapid recovery message to the whole world	Tourist attraction (Beijing) Media (Wuhan)
Tourism and new technologies	6	" . . . the exhibition hall is temporarily closed . . . we can walk into it through the VR panorama of the Palace Museum Exhibition App . . . "	Virtual reality	Tourist attraction (Beijing)
	7	" . . . we will suspend the manual explanation service . . . you can use the intelligent audio guide device of the museum . . . "	Digital audio guide	Tourist attraction (Wuhan, Beijing, Shanghai, Guangzhou)
	8	" . . . the Municipal Park Management Center is actively building a smart ticketing platform . . . "	Smart ticketing platform	Municipal Bureau of Culture and Tourism (Beijing)
	9	" . . . Guangdong can take the opportunity of 'cloud trading' to integrate into the global trend of mobile Internet, new media, and	New technologies	Media (Guangzhou)

(*continued*)

Classification	No.	Examples of posts	Key content	User
Cultural tourism	10	integrate artificial intelligence, big data, 5 G . . . to promote cloud economy, cloud expo, cloud cultural tourism . . . " " . . . 'Relics Don't Talk - Listening After Recovery' was co-hosted by Hubei Provincial Museum . . . The event interprets the story behind 6 cultural relics in short videos, and conveys the traditional Chinese humanistic spirit . . . " " . . . We held Weibo online activities, such as the 'How Much You Know About Guangdong Museum' knowledge contest . . . 'Guangdong Museum's Intangible Cultural Heritage' live broadcast . . . " . . . 'Beijing intangible cultural heritage open course' series were launched . . . "Meihuazhuangquan" - one of China's traditional martial arts, was taught to help people to enhance the body's immunity against the COVID-19 . . . " " . . . Shanghai Museum will launch the 'Tang Dynasty Heishi Shipwreck Relic Collection exhibition' - the first inbound exhibition of cultural relics after the pandemic . . . "	Cultural forum, course and exhibition	Tourist attraction (Wuhan) Tourist attraction (Guangzhou) Media (Beijing) Tourist attraction (Shanghai)
	11	" . . . during the Chinese New Year . . . organize online cultural performances, Spring Festival temple fairs . . . carry out cloud tours, cloud classrooms . . . " " . . . a dragon boat is displayed in Guangdong Museum . . . How did the children inherit the dragon boat culture? On June 12, let us follow the camera . . . [broadcasting platform]"	Celebration of traditional Chinese festivals	Media (Beijing) Tourist attraction (Guangzhou)
Rural tourism	12	" . . . tourism products such as ecology, red, gourmet, picking . . . will be launched . . . a series of products called 'Visiting Shanghai' will be launched, hoping to guide citizens and tourists to experience Shanghai . . . " " . . . will launch a series of Beijing outings in the directions of Gubei Water Town, Yunmeng Mountain, Yunfeng Mountain, and Yanqi Lake . . . "	Traveling to superb	Municipal Bureau of Culture and Tourism (Beijing), media (Shanghai)
	13	" . . . despite the impact of the pandemic, people's willingness to travel is still relatively strong, and a large number of passengers flows to villages, mountains and lakes . . . various localities have launched folk tours, hot spring tours, ski tours, flower viewing . . ."	Enjoying the nature	Media (Wuhan)
	14	" . . . Guangzhou launched the 'Beautiful countryside' project . . . Hot Spring Fortune Town, Ecological Design Town, National Medical Town . . . have received unanimously praised . . . "	Countryside tourism	Media (Guangzhou)

Source: Elaborated by the authors

Table 3	Dark tourism of China's main tourism cities			
Classification	No.	Examples of posts from Sina Weibo	Key content	User type
Remembering the history and treasure the current	1	" . . . the volunteers on the battlefield of Shouyi had no hesitation to overthrow dictatorship and establish a republic . . . we will work hard on the front line of the battle against the pandemic . . ." " . . . Beijing and Shanghai launched 'fight the pandemic, united as one, cheer for China' comics and short video collection activities . . . guide positive energy, popularize the knowledge of pandemic prevention . . . " ". . . literary and art workers demonstrated their determination to fight the pandemic through calligraphy, painting, sculpture, music and other art forms, sung the anti-pandemic spirit . . . "	Online course Video collection activity Artwork	Tourist attraction (Wuhan) Municipal Bureau of Culture and Tourism (Beijing) Tourist attraction (Guangzhou)
Entrance subsidies to medical staffs who fight against the COVDI-19	2	" . . . medical aid team members in Hubei can visit A-level tourist attractions in the province for free within 5 years . . . " " . . . until December 31, 2020, Beijing Tourism Distribution Center's 'one-day tour' tourism product will provide free rides for medical workers . . . "	Free ticket	Local media (Wuhan, Beijing)
	3	" . . . a total of 228 A-level tourist attractions in the province . . . will provide medical workers with preferential services such as free tickets and consumption discounts . . . " " . . . Shanghai/Beijing/ Chongqing Madame Tussauds will open a half-price discount for the medical staffs from the opening date to June 30, 2020 . . . "	Ticket discount	Local media (Guangzhou) Tourist attraction (Shanghai)
For the lament of the deceased people	4	" . . . the State Council issued an announcement deciding to hold a national mourning event on April 4, 2020 . . . national and foreign embassies and consulates flew flags at half-mast, and public entertainment activities were suspended nationwide . . . "	A national mourning	Tourist attraction (Guangzhou, Wuhan), media (Shanghai, Beijing)

Source: Elaborated by the authors

subsidized staff training plans (Table 2, No. 3). Shanghai and Beijing preferred to enhance local tourism competitiveness with the former integrating tourism and technological resources in e-sport and e-tourism consumptions; and the latter supporting the launching of tourism events such as oversees tourism promotion and market management (Table 2, No. 4).

4.2.2 International image. During the recovery stage of domestic pandemic, international events were convened to transmit the rapid resilience message of China's tourism to the whole world. From June to December 2020, Beijing held several international festivals such as trade and service fairs, and brand festivals (Table 2, No. 5). In October 2020, Wuhan Municipal Bureau of Culture and Tourism celebrated the "Foreigners in China Traveling to Wuhan" event, where a sense of safety and satisfaction was expressed by the visitors (Table 2, No. 5). At the same time, the foreign media CNN (Gan, 2020) released a report saying that "China has brought the new coronavirus pandemic under control. Now, hundreds of millions of people there are beginning to take vacations." CNN also specifically mentioned in the report that, "Wuhan becomes one of the most popular destination cities for the Chinese tourists and will regain its vitality and overcome the upcoming difficulties in dealing with the global pandemic."

4.2.3 New trends of tourism growth. 4.2.3.1 Development of China's "cloud tourism" and new technologies. Under severe outgoing restrictions, the main Chinese tourism cities launched "cloud tourism" to promote their tourism products and services through online platforms. One key method was to present vivid videos of local gastronomy, daily life and sightseeing to arouse people's memory over the past happiness to revisit the city after the pandemic. For instance, Wuhan local media appealed the tourists to see the "cherry blossoms" through visualizing its blooming on Weibo videos (Figure 2). Shanghai and Guangzhou Zoological Parks focused on the presentation of local images through illustrating adorable animal pictures (Figure 3).

The technology utilization into tourism recovery was also stressed by local tourism administrations and tourist attractions. The Palace Museum (Beijing) introduced one exhibition App, where a virtual reality panorama of the treasure collections in the museum was opened to the customers (Table 2, No. 6). Olympic Museum (Beijing), Hubei Museum (Wuhan), Shanghai Museum and Guangdong Museum (Guangzhou) used the intelligent audio explanation and guide services to replace manual guides and prevent physical contact (Table 2, No. 7). Moreover, Beijing Municipal Bureau of Culture and Tourism established the smart ticketing platform for the municipal park management, with online reservation services and big data analyses of customer profiles, to improve the smartness and safety of local park visits (Table 2, No. 8). Guangzhou Municipal Bureau of Culture and Tourism paid special attention to the integration of high-tech including new media and artificial

| Figure 2 | Online enjoyment of cherry blossom |

Source: Sina Weibo

Figure 3 Adorable animals in Shanghai and Guangzhou Zoological Parks

Source: Sina Weibo

intelligence into the development of local cloud economy, tourism and enhancement of tourism competitiveness (Table 2, No. 9).

4.2.3.2 Development of China's cultural tourism. Another key issue focused on the transmission of traditional Chinese culture through launching either online or offline activities. Hubei Museum (Wuhan) and Guangdong Museum (Guangzhou) held online forums to further arise people's awareness of learning the culture. Beijing Municipal Bureau of Culture and Tourism carried out online courses to help the citizens strengthen their body and enrich their home time during the lockdown. Shanghai Museum launched offline exhibitions, where cultural relics were presented to reveal the past mysteries from the Tang Dynasty (Table 2, No. 10). The celebration of traditional China's festival became another important part of Chinese cultural transmission fostered online, for example to celebrate the Spring Festival, or the Dragon Boat Festival (Table 2, No. 11).

4.2.3.3 Development of slow tourism under enjoying the superb and nature sites. Under the huge impacts of the pandemic, nature tourism also gained rapid growths. Traveling to superb areas became popular and were promoted by many cities involving Beijing and Shanghai (Table 2, No. 12). Local Municipal Bureaus of Culture and Tourism launched several visiting of the superb Beijing/Shanghai semi routes, to encourage the citizens and tourists to enjoy the cities through viewing local architecture and tasting the gastronomy. Wuhan Municipal Bureau of Culture and Tourism focused on the promotion of local tourism specialties including ski, flower viewing and mountaineering tours (Table 2, No. 13). Guangzhou Municipal Bureau of Culture and Tourism launched the "Beautiful countryside" project, including the promotion of local rural tourism products such as forest recreation, agriculture sightseeing, self-driving camping, to help local tourists to escape from daily anxieties and avoid the exposition to the COVID-19 (Table 2, No. 14).

4.2.4 China's dark tourism. As part of the potential tourism recovery strategies, dark tourism related contents were analyzed in this section (Table 3). In 2020, several courses and exhibitions were held in Wuhan, Beijing and Guangzhou in the commemorate of the people who fought against the pandemic (Table 3, No.1 and Figure 4). Through the narrative scenes of the hospitals, and the stories of those who survived from the pandemic, the national bravery and persistence were showed and acted as an attractor for tourists. Moreover, entrance

Figure 4 Online exhibitions of dark tourism

Source: Sina Weibo

subsidies and discounts were offered to express the appreciations to the medical staffs who worked on the frontlines against the pandemic (Table 3, No. 2 and 3). The last attractor for tourists was based on the lament of people deceased during fights against the pandemic and inheritance of national patriotism. On the Qingming Festival in 2020, a national mourning was held, with a three-minute horn of cars, trains and ships spreading every corner of China and cancellation of all the domestic entertainment activities (Table 3, No. 4). It expressed the good wishes to the deceased people to rest in peace and those who survived could be fearless when confronting with future difficulties.

5. Discussion

This study focused on prevention measures and tourism recovery of four main China's tourism cities, under the pandemic backgrounds. From the perspective of prevention measures, a series of top-down and flexible regional policies were implemented according to the local situations of pandemic expansion and mobility flows. Our findings confirmed the relevance of prevention measures based on mobility restriction, public places disinfection, sanitation and distancing, similarly to worldwide researchers (Im, Lam, & Ma, 2021; Vărzaru, Bocean, & Cazacu, 2021; Villacé-Molinero, Fernández-Muñoz, Orea-Giner, & Fuentes-Moraleda, 2021). Moreover, our findings emphasized the significance in the planning of urban tourism prevention protocols for cities, by taking close supervision over interprovincial, vacation travels and participation in tourist activities. We also witnessed the wide use of applications (Apps) for pandemic prevention and control in all the tourism cities in China, that allowed tourist trace within 14 days and recorded basic health conditions (Cheng *et al.*, 2021). These applications served as an example for other countries and regions, for the improvement of pandemic management in tourist attractions and tourism cities or destinations.

In terms of tourism recovery, our results highlighted that Chinese tourism cities applied multiple strategies that allowed their rapid recovery. From our findings, we classified these strategies into four main typologies, including those related to financial supports, promotion of international image, new trends of local tourism – emphasizing the role of technology, culture and nature and the development of dark tourism. Some of these strategies were also explored by previous studies. For example, new technologies played a key role in the form of digital tours launched in many European cities, such as Naples and Kraków, for the enhancement of local cultural authenticity and reservation of heritage resources (Bosone, Nocca, & Fusco Girard, 2021; Kowalczyk-Aniol, Grochowicz, & Pawlusinski, 2021). These studies also stated that modern technologies would be able to accelerate the development of the contemporary tourism management and city branding in the pandemic scenario (Lu *et al.*, 2021; Lu & Atadil, 2021; Ngo. T.T, Bui. L.A, Pham. T.H, Mai. N, & Bui. K, 2022).

Among the new trends in tourism motivated by the pandemic also emerged the significant role of culture and nature in our results. It was pointed out similarly by previous studies that considered the pandemic as an opportunity for the exploration of areas with rich nature resources, changing tourist preferences towards tourism in nature and superb areas (Neuman, Chelleri, & Schuetze, 2021; Huang, Shao, Zeng, Liu, & Li, 2021). This idea was already developed into a sustainable tourism transition sense and advocated in many European cities, in the construction of green, inclusive and collaborative destinations (Jiricka-Pürrer, Brandenburg, & Pröbstl-Haider, 2021; Pasquinelli, Trunfio, Bellini, & Rossi, 2022). In the future, China's tourism is also expected to be developed towards a more sustainable transformation, by embracing local characteristic, green initiatives, ecological and picking-up tours, local folks, homestays, etc. as part of the tourism reconstruction process.

One relevant recovery strategy that appeared in our results was the development of China's dark tourism under the pandemic background. From previous studies, this kind of tourism was regarded as part of post-disaster recovery and resilience strategies (Zhang, 2021). Travelers to Western and non-Western dark tourism sites could express differentiated feelings – more entertaining, historic-oriented for Western tourist sites (Lewis, Schrier, & Xu, 2021) and more reflections on human life and national identity in non-Western (Qian, Zhang, Zhang, & Zheng, 2017; Wang, Shen, Zheng, Wu, & Cao, 2021). Our results confirmed these remarks, by presenting main large exhibitions and nationwide lamentation in Wuhan, Shanghai, Beijing and Guangzhou. They were celebrated to memorize the people who sacrificed during the pandemic, contributing to the inheritance of traditional Chinese patriotism and self-sacrifice spirits.

6. Conclusions

As a conclusion, this study revealed that top-down prevention and control measures were implemented by the Chinese central and local governments during the stage of mass infection provoked by the pandemic. The promotion of international image through reemployment under governmental financial supports to re-boost China's tourism also gained great attention. New trends in tourism based on risk avoidance, digitalization, close-to-nature and cultural heritages have become crucial factors in the future development of China's tourism. Dark tourism, as a potential tourism recovery strategy, appeared with strength, not only for the memory of people deceased in the pandemic but also for the inheritance of national patriotism.

In general, this paper has enriched the literature in the context of the global tourism recovery and resilience, through filling the gaps around Chinese recovery of tourism cities, recognized worldwide by their effectiveness and speed. Our research provides a more holistic and complete view on the measures applied in the pandemic scenario, showing both, prevention measures and recovery strategies, to observe the adaptation of these measures and policies over time, in accordance with the evolution and different waves of the pandemic. Some strategies and trends were already stated by other studies, such as the use of new technologies and the thoughts on new approaches for obtaining a more sustainable tourism model. In our study we have complemented these strategies with those applied in Chinese cities, based on financial support and on the benefits of natural, cultural and identity heritages to boost tourism under adaptive and control measures to restrain contagion. Our results have also highlighted the pandemic as a driver of dark tourism, that could be extrapolated to other global severe health emergencies.

These strategies involve some practical implications for tourism cities, destinations and local governments in finding possible way-outs in controlling the local pandemic and boosting tourism activities and could be further expanded to local tourist attractions and scenic spots. Among these implications, it is worthy to mention the growth opportunities in exploiting traditional cultural and natural resources with the combination of modern technologies. It is

also anticipated the suitability of a sustainable transition in the future of China's tourism recovery, particularly through the promotion of characteristic tourism, accommodations in some rural and suburban areas, that might boost tourism activities and impact positively cities' and destinations' image and sustainability. The exploration of dark tourism also emerges as a relevant solution for the tourism industry in Chinese tourism cities, with special emphasis on the inheritance of national patriotism and marketing opportunities in the promotion of historical stories and campaigns.

There are also some limitations and future research directions as follows. As the third wave of domestic pandemic occurred in September 2021, it would be of crucial importance to extend the research timespan and scope in investigating new policies, measures and tourism growths. Our research method, the content analysis in social media platforms, can be combined with analytical software to make it more systematic and precise (Ngo. T.T, Bui. L.A, Pham. T.H, Mai. N, & Bui. K, 2022). Moreover, we only concentrated on the supplier side – local tourism administrations and industrial practitioners, whereas other stakeholders such as tourists and local community could also be included in future research.

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