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Crisis Management during the COVID-19 Pandemic: A Case Study of Ctrip

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Abstract. The COVID-19 pandemic has created significant developments in the year since 2020, particularly in the worldwide tourist sector. Tourist-related sectors have suffered significant damage, with China's domestic tourism industry in critical condition. Not only did this industry's income plummet, but allied businesses such as restaurants and transportation also experienced significant losses. This unprecedented public health crisis, marked by its suddenness, intensity of injury, and uncertainty about future development, has had a massive impact on a wide variety of individuals. This article depicts the influence of COVID-19 on China's tourist business, taking into consideration the industry's present development before and after the pandemic. Using Ctrip (a Chinese tourism company) as an example, this paper employs the case analysis method to examine Ctrip's operational capabilities, organizational leadership, and organizational culture as embodied in its fight against the pandemic, as well as its handling measures in the face of the tourism crisis. Finally, several ideas are proposed to promote tourism development in the post-pandemic era: integrating the digital economy and promoting the innovative development of digital tourism; changing business mindsets to make the relevant industrial chain bigger and stronger; establishing a regular management organization to deal with tourism crises and improving the tourism crisis management mechanism. This study may be useful for future tourism enterprises' response plans in the event of a public health crisis.

Keywords: ctrip, online travel, crisis management, organizational culture.

1. Introduction

1.1. Research background and significance

The essence of travel is pleasure, and the primary reason for seeking pleasure in a foreign location is to experience its associated social, leisure, and consumption attributes. Because of its mobility and recreational nature, travelers prioritize safety, and the perceived risk of the destination influences travel choices.

A tourism crisis was defined by the World Tourism Organization in 1994 as "any event that may threaten the normal operation and behavior of tourism-related industries." Any event that harms a tourism destination's overall reputation in terms of safety, attractiveness, and comfort by negatively influencing tourists' perceptions of the destination (Sönmez et al., 1999).

In recent years, the global tourism industry has undergone numerous crises, such as Fukushima's radioactive water leak in 2013, Sri Lanka terrorist attacks in 2019, Tonga volcanic eruption in 2022. Particularly, COVID-19 has been recognized as the most dangerous and historical emergency public health event that has led to a severe health crisis and changed the path of human beings. However, regarding the tourism crisis of this scale, there have been fewer studies on its significant impact on global tourism and the corresponding solutions for crisis management.

Cai and Han summarized the World Tourism Organization's "Guidelines for Crisis Management in Tourism" (Cai et al., 2003a), "In Crisis: Turning Danger into Safety in the Face of Danger" (Cai et al., 2003c), and "Post-crisis: Reinventing the image and seizing the moment" (Cai et al., 2003b). The number of domestic travelers in 2020 will be 2.879 billion, a 52.1% decrease from 2019. Domestic tourism has decreased by 53.8% for urban residents and 47.0% for rural residents. Domestic tourism revenue in 2020 is CN 2.23 trillion, CN 3.50 trillion less than in 2019, representing a 61.1% year-on-year decrease.

Domestic, inbound, and outbound tourism are all declining precipitously. Local scenic spots, travel agencies, tourism, cultural performances, museums, and bed and breakfast options have all suffered significantly. Share prices and the market have also fallen significantly for publicly traded travel companies.

These data show that as far as the response to the COVID-19 pandemic is concerned, Chinese tourism enterprises generally lack crisis management awareness and have poor risk resistance. With all areas of the tourism industry damaged and several tourism enterprises facing an existential crisis, the pandemic has seriously affected China's tourism economy.

When a major crisis occurs, the two goals of crisis management are to 1) respond quickly and self-regulate in order to overcome difficulties; and 2) find another way to learn, improve, and surpass the original state in order to turn crisis into opportunity. The most important test of a company's ability to manage change is crisis

management, which emphasizes the need to improve in response to internal and external organizational conditions and seek different and appropriate management modes for diverse situations. The essence of organizational management is contingency, and adaptability is the core concept of organizational management. Strategic objectives, organizational culture, organizational structure, value chain, organizational leadership, and organizational learning ability are all internal contingency factors that influence corporate decision-making. These internal variables can be used to create resources

Ctrip was chosen as the study subject because it is China's largest online travel company, providing a wide range of services such as hotel booking, airline ticket booking, vacation booking, ticket booking, travel management, and other businesses. Despite these plausible influences, there are few studies on Ctrip in China, and research on the COVID-19 crisis is scarce.

Furthermore, because Ctrip is a publicly traded company, its data is open to the public and easy to obtain and compile. In addition, Ctrip has been through the "SARS" crisis, the Wenchuan earthquake, and other major public crises in the 20 years since its inception, which has theoretical and practical research value.

1.2. Research framework

This paper's research objectives include analyzing Ctrip's COVID-19 crisis management measures and providing references for tourism companies' countermeasures in the face of public health crises. As a result, sustainable development of the tourism industry in the post-pandemic era can be facilitated.

To begin, this paper discusses the development status of China's tourism industry before and after the pandemic. Second, we use data to demonstrate the impact of the pandemic on the tourism industry. Third, Ctrip's development history is presented, demonstrating that Ctrip, as the leading company in China's online travel market, has self-rescue strategies that can be replicated.

The specific research plan is to investigate Ctrip's crisis management program while considering Ctrip's operational capability, organizational leadership, and organizational culture during COVID-19. Finally, in light of the trend of digital tourism development, this paper proposes countermeasures for tourism development in the post-pandemic era.

The article's research results are finally obtained based on the above research contents.

2. Literature Review

2.1. Chinese tourism industry status before and after COVID-19

(1) China's growing tourism market before COVID-19

According to the China Tourism Economy Blue Book (No.13) (China Tourism Research Institute, 2021), the number of Chinese domestic tourists reached 6.01 billion in 2019, an increase of 8.4% from the previous year. Meanwhile, according to the 2019 National Economic and Social Development Statistics Bulletin of the People's Republic of China published by the National Bureau of Statistics of China (National Bureau of Statistics of China, 2021), domestic tourism revenue was CN 5,725.1 billion, an increase of 11.7% year on year. Between 2015 and 2019, China's annual revenue from domestic tourism exceeded CN 3 trillion, as shown in [Fig. 2]. At the same time, Chinese tourists' willingness to travel outside of China is clear, and the choice of tourist destinations reflects a variety of trends, with footprints in all directions.

Furthermore, with the growth of the Internet, the tourism industry has entered the "Internet+" era. China's online travel market is rapidly expanding, with CN 1,086.6 billion in online travel transactions in 2019, representing a 11.4% year-on-year increase. According to the competition pattern, the online travel market share has gradually been divided among the leading companies, demonstrating "one super, many strong." Ctrip leads the pack in terms of market share, followed by Qunar, Meituan, and Tongcheng Travel in the second tier, all of which have strong competitiveness and promising future prospects in China's online travel market.

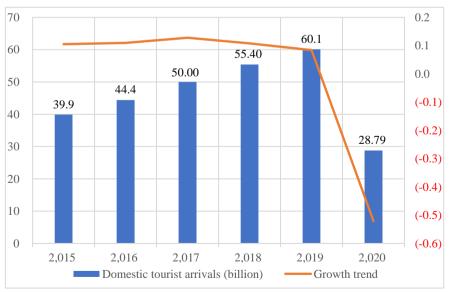


Fig. 1: China Domestic Tourist Arrivals and Growth Trend from 2015 to 2020.

(2) China's sluggish tourism market growth at COVID-19

Following the COVID-19 outbreak in 2020, the tourism industry was forced to close for an extended time. The tourism market was weak in the first half of the year, causing a variety of problems, including the closure of some small and medium-sized tourism businesses. According to the China Tourism Research Institute' (China Tourism Research Institute, 2021) "China Tourism Economy Blue Book (No.13)," due to the COVID-19 outbreak, 2.879 billion domestic trips were made in 2020, a 52.1% decrease from 2019.

Domestic tourism revenue in China is CN 2.23 trillion, down 61.7% from 2019. According to Netscape's "2020 China Online Tourism Market Data Report," the transaction size of China's online tourism market in 2020 was CN 638.6 billion, a 36.52% decrease from the same period the previous year, as shown in [Fig. 3] (100EC, 2021).

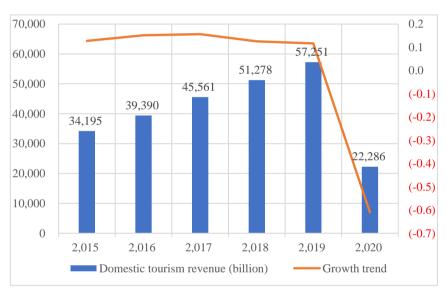


Fig. 2: China Domestic Tourism Revenue and Growth Trend from 2015 to 2020.

Because of the pandemic, Chinese online travel companies lost money overall, and platform businesses suffered to varying degrees, with 16 online travel platforms closing down. According to the annual report (TRIP.COM GROUP LIMITED, 2021), Ctrip's annual revenue in 2019, prior to the pandemic, was CN 35.67 billion, an increase of 15.18% per year, and in 2020, after the pandemic, its net revenue was CN 18.3 billion, a decrease of 49% per year, with an annual net loss of CN 3.2 billion.

(3) China's tourism market recovery after COVID-19

The 14th Five-Year Plan began in 2021, and China's domestic tourism industry had begun to recover gradually after the pandemic had been contained. According to the Ministry of Culture and Tourism of the People's Republic of China's 2021 Annual Domestic Tourism Data (Ministry of Culture and Tourism of the People's Republic

of China, 2022d), China's total domestic tourism arrivals were 3.246 billion and domestic tourism revenue was CN 2.92 trillion in 2021, representing a year-on-year increase of 12.8% and 31%, respectively, and recovering to 54% and 51% of 2019 levels for the same period.

The successful bid for the 24th Beijing Zhangjiakou Winter Olympics has sparked "skiing fever" in Beijing, Tianjin, Hebei, and across the country. According to Mob Research Institute's "2020 China Ski Industry White Paper," the number of ski trips for fiscal year 2020 to 2021 is 20.76 million, up from 10.45 million in 2019 to 2020, a 98.66% increase per year (MobTech, 2021). Furthermore, according to a report released by the China Tourism Research Institute, China's snow and ice tourism revenue is expected to reach CN 680 billion in the 2021-2022 winter season, with the total industry value exceeding CN 1 trillion (Ministry of Culture and Tourism of the People's Republic of China, 2022a). The People's Republic of China's Ministry of Culture and Tourism, in collaboration with other departments, will release the "Snow Festival" in 2021, which proposed achieving the goal of "engaging 300 million people in snow and ice sports" by 2022. Based on the foregoing, we can conclude that the future of ski tourism and its associated markets is bright.

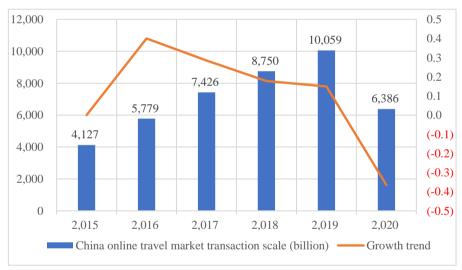


Fig. 3: China Online Travel Market Transaction Size and Growth Trend from 2015 to 2020.

2.2. Ctrip's development stages

Ctrip is a pioneer in the online travel industry in China. Ctrip's total transaction volume (GMV) in 2019 surpassed Booking and Expedia to rank first among global online travel companies (TRIP.COM GROUP LIMITED, 2021). Ctrip's development history can be divided into three stages:

(1) Start-up Period (1999–2003)

Ctrip was founded in 1999, at the beginning of China's tourism development stage, and was initially funded by major investors such as Carlyle Group, SoftBank, IDG, Shanghai Industrial Investment, Orchid, and Morning Side. Ctrip acquired Modern Express, China's largest traditional booking center, in 2000, marking the first step toward combining the Internet and tradition. The following year, Ctrip overtook Booking.com as China's largest hotel booking service. Ctrip purchased Beijing Coastal Airlines in 2002 to expand its air ticketing busines.

Moreover, Ctrip was able to combine traditional ticketing channels with emerging Internet technologies as a result of these two acquisitions, and an online ticketing system took shape. In 2003, Ctrip's ticket booking network covered 35 cities in China and was listed on NASDAQ in the United States, with an opening day gain of 88.6%, a NASDAQ record for three years at the time.

(2) Growth Period (2004–2015)

Ctrip acquired the Shanghai Cuiming International Travel Agency in 2004, following its successful IPO, which had the right to outbound operations, combining an online travel service platform with an offline travel agency. In 2008, Ctrip purchased Beijing CSHOTEL, a massive hotel management service provider in China. This acquisition paved the way for the company's subsequent hotel management venture. Ctrip invested in ezTravel, Taiwan's largest online travel agency, in 2009 and increased its stake in Rujia to 18.25%, making it the company's largest shareholder. In February 2010, Ctrip acquired a 90% stake in Hong Kong Wing On Travel Service Limited's travel business, and Ctrip's one-stop travel service took shape.

Ctrip entered the American market in 2014 by investing in 'Tours For Fun' (an American travel agency). Ctrip invested US\$ 200 million in Tongcheng Travel in April of the same year for a mutually beneficial deal in the ticket booking and travel and vacation sectors. In December, it also spent US\$ 15 million to acquire additional shares in Tuniu Corporation in order to promote resource sharing of air tickets, hotels, and car rentals between the two companies. Ctrip and Qunar merged in October 2015 through an equity swap, solidifying their position in China's online travel market. Ctrip was named one of China's top ten Internet companies the same year.

(3) Maturity Period (2016–Present)

After consolidating and integrating in the domestic market, Ctrip began its international expansion in 2015. Ctrip spent \$180 million in January 2016 to acquire a stake in MakeMyTrip, India's largest travel company. Besides, Ctrip collaborated with the three largest travel agencies in the United States, Universal Vision, Ctour Holiday, and Tours For Fun, in October to expand in the United States market. With the acquisition of Skyscanner, a UK-based airfare search platform, in November, overseas online traffic increased. Finally, Ctrip strategically collaborated with Stena

Line, the world's largest ferry company, in June 2017 to expand the shipping business and company's presence in the European market.

Skyscanner, a Ctrip subsidiary, acquired Trip.com, a social travel search website in the United States, and Twizoo, a social review website in the United Kingdom, in November of the same year. Trip.com launched operations in South Korea, Japan, and other Asia-Pacific regions in order to provide 24x7 services and expand the Asia-Pacific market. Ctrip have become MakeMyTrip's largest shareholder in August 2019 through an equity swap, boosting the company's competitiveness in the Indian travel market. According to the financial report, Ctrip's 2019 net operating revenue was CN 35.67 billion, up 15.2% year on year, and GMV was CN 865 billion, up 19.3% year on year, retaining the number one position in the global online travel industry and leading China's online travel market (TRIP.COM GROUP LIMITED, 2021).

3. Research Methodology

3.1. Ctrip's operational capacity

The People's Republic of China's Ministry of Culture and Tourism issued the "Emergency Notice on Suspending Tourism Enterprises' Business Activities for the Prevention of Pneumonia Infected by COVID-19" (Ministry of Culture and Tourism of the People's Republic of China, 2020) and other tourism control policies on January 26, 2020, at the start of the outbreak. It also proposed that travel agencies and online tourism businesses across the country immediately suspend the operation of group tours and "air ticket and hotel" tourism products. People movement restrictions, home quarantine, and strict controls have emerged as the primary means of combating the pandemic.

The first challenge for online travel companies was the high volume of refunds and changes that coincided with the Chinese New Year holiday, as well as the industry's tight capital chain, which put the companies' operational capacity to the test. According to the "2020 Ctrip Anti-Pandemic Report" (TRIP.COM GROUP LIMITED, 2021), Ctrip received over 10 million inquiries in a single month, with over 2.5 million inquiries from users searching for the keyword "cancel." Faced with a "cancellation wave" caused by panic, Ctrip organized and coordinated with millions of suppliers in over 200 countries and regions worldwide, handling tens of millions of refunds and changes for hundreds of millions of users, involving more than CN 31 billion, and responding to the national policy by launching a special refund program. As a result, refunded users will bear a total loss of CN 1.2 billion. As of February 21, 2021, all refund and change orders received during the pandemic had been processed.

3.2. Ctrip's organizational leadership

Managers with strong organizational leadership can optimize organizational structures and operational mechanisms, adapt to new environments and mechanisms, and solve major issues efficiently. Positively oriented leaders have superior

coordination and communication skills, which aid an organization in responding to unexpected events (Jeongmin Lee et al., 2018). During the pandemic, the travel industry suffered a downturn and bore the brunt of the consequences. The fear of infection was a source of stress for travel professionals, but the fear of losing their jobs and uncertainty about their future careers were more significant sources of stress (Yi et al., 2020). In times of crisis, the ability of tourism practitioners to regulate psychological stress and alleviate negative emotions and stress is critical for the operation of tourism enterprises (Park et al., 2020).

First of all, Ctrip announced a voluntary pay cut for the top management of the company, but frontline employees still received normal salary increases. The measure of no salary reduction and no layoffs made employees feel the support of the company, which not only stabilized the hearts of employees and increased their loyalty but also boosted the morale of the team. Second, Ctrip put forward the "Buddy Program", providing CN¥ 1 billion as a partner support fund and CN¥ 10 billion to small and medium-sized enterprises in the fields of air tickets, hotels, and resorts on its platform, reducing the advertising and promotion costs invested by suppliers before the Spring Festival and waiving the management fees of travel stores for 3 months, among other measures to help relieve the operating pressure of partners. Ctrip has led the way for large enterprises by linking supply chains and precise subsidies to overcome difficulties with SMEs with poor risk resistance, reflecting Ctrip's commitment and responsibility to society (Jun et al., 2020).

According to the annual report, Ctrip is expected to spend CN 7.67 billion on R&D in 2020, a 28.1% decrease year on year, but the rate of decline is much lower than the proportion of the decline in operating revenue in the same year, implying that the intensity of investment in R&D expenses has increased rather than decreased, accounting for 53.67% of gross profit. Ctrip's net loss in 2020 was CN3.2 billion, as previously stated. Ctrip invested the majority of its gross profit in R&D expenses, a non-recurring expense item that has little impact on the current period's operating income growth but has a significant impact on net profit decline (Zhang et al., 2019). This demonstrates that the company's management is not swayed by short-term profits and losses, but instead focuses on and acts on long-term strategic development.

3.3. Ctrip's organizational culture

Organizational values are reflected in organizational culture. A positive organizational culture performs orientation, cohesion, restraint, motivation, and image building functions (Kwon, 2019). A positive organizational culture shapes members' internal and external image. It aligns organizational members' values and behaviors with organizational goals through a code of conduct, value standards, training, and education. It contributes to organizational stability by motivating members to respond to environmental changes in a positive and effective manner (Yi et al., 2021). Ctrip, an abbreviation for China trip, represents the five core values

listed below: C represents customer-centricity; T represents teamwork: a close and seamless cooperation mechanism; R represents responsibility: meticulous dedication; I represents integrity: a true and honest cooperation concept; and P represents partnership and multi-win cooperation (Venkatesh et al., 2003).

In 2017, Ctrip launched the "Global Travel SOS" service, which allows customers to contact Ctrip's 24x7 emergency support staff at any time if they have an emergency while traveling. The system provides 24-hour translation services, medical advice, lost and found services, and timely assistance to travelers in emergency situations like natural disasters and terrorist attacks. The system is designed to reduce customer anxiety while also protecting their rights. When the COVID-19 pandemic in China erupted in early 2020, many countries barred Chinese tourists from entering, and nearly 10,000 international flights were canceled. Faced with this unanticipated travel crisis, Ctrip activated its emergency response mechanism to provide additional protection for tour groups affected by return flight cancellations and to assist tourists in returning to China by changing their flight schedules.

Six Sigma is a standardized management technique used in the manufacturing industry to measure and eliminate defects in the service process. To implement Six Sigma management, the premise must be customer-centered; that is, the Six Sigma values of all business processes must be defined in accordance with customer needs (Han et al., 2020). Ctrip implemented Six Sigma management throughout the company, with the goal of "using manufacturing standards in the service industry." Ctrip applied the Six Sigma system to the field of tourism services, transforming customer service skills that previously relied on individual abilities into standardized process management operations. Top-down, bottom-up, and cross-departmental teamwork were improved, promoting internal collaboration. Ctrip effectively increased order processing speed and reduced order error rates by implementing Six Sigma, demonstrating a meticulous professional dedication.

Ctrip also launched the "Hand in Hand with the Pandemic" public welfare action, introducing 2,000 public welfare cars to support the public welfare car needs of nearly 100 cities and launching the "War on the Pandemic Allowance." Following the completion of their orders, all Ctrip drivers received a CN 5 subsidy. Ctrip Car Rental launched the "Peace of Mind Cancellation Guarantee" service for users at the same time as Ctrip's air ticket, hotel, airplane ticket, and train ticket businesses. These first-of-their-kind measures have gradually become mainstream in the industry, fulfilling the social responsibility to set an example During the pandemic, Ctrip took the initiative to assist small and medium-sized businesses upstream and downstream of the supply chain in reducing their economic losses. The "Buddy Program" provides funds and mortgages to small and medium-sized businesses (Y. Lee et al., 2020). Furthermore, Ctrip offered online courses on the APP that covered operational skills, system operation, platform rules, and other training content. This series of measures

ranged from economic assistance to online learning, addressing suppliers' urgent needs. Ctrip and its partners have overcome these challenges together through thick and thin, demonstrating close and seamless, true and honest collaboration.

4. Results and Discussion

Domestic tourism in China has shown a recovery and rebound trend as of early 2022, but outbound tourism is still struggling due to the global pandemic, which is still not under control. Currently, all tourism companies are focused on the domestic market, and market competition is becoming increasingly fierce. Based on this, we propose the following recommendations for post-pandemic tourism development.

Firstly, the travel industry should encourage the growth of digital tourism. Cloud tourism and intelligent tourism, such as "no contact" new digital tourism, aim to adapt to the current state of tourism development in an innovative way (Yang et al., 2018). Ctrip, for example, launched "scenic cloud tourism" during the critical period of the pandemic, which is a new type of consumer content inducing new consumption habits. The use of digital technology to promote the growth of the cultural tourism industry has become a central component of current policies. For example, the State Council General Office issued the "Guidance on Promoting the Development of Territorial Tourism," which clearly proposes the use of digital technology to accelerate the development of deep integration of culture and tourism (General Office of the State Council, 2018).

Digital technology can also be used to turn static playback into interactive and immersive 3D tours in historical structures, theme parks, exhibition halls, and other cultural carriers (Yu et al., 2021). Virtual reality (VR), augmented reality (AR), and digital multimedia technologies can all be used in cultural tourism performances. The development of immersive experience performances that integrate digital technology and tourism performing arts is a tried and tested method of promoting the growth of digital tourism (Ministry of Culture and Tourism of the People's Republic of China, 2022b).

Secondly, business ideas are transformed, and related industrial chains are created. Tourist travel has changed in the post-pandemic era. Travel agencies used to organize group trips, but nowadays, tourists prefer to travel in small groups or as family units. Booking methods have also shifted from face-to-face consultation at travel agencies to placing orders on online travel platforms and making travel plans through social networking software such as Weibo, Little Red Book, and Douban. Traditional tourism businesses, such as scenic spots, travel agencies, and ticket agents, should actively seek out diverse operational solutions, transition from traditional sales to self-media marketing, and transition from business-to-business to business-to-consumer (Shang et al., 2019).

The creators of the "Tiktok + Scenic Spot" ticketing model, for example, associate the applet with the videos of tourist attractions that they post. The creator may receive cash bonuses if fans purchase tourism products via the app. This new media B2C marketing pattern has resulted in the development of a new scenic spot marketing pattern.

Economic benefits in the tourism industry do not stem from the entrance fee, which accounts for only a small portion of revenue (Jaeram Lee et al., 2019). Local governments should prioritize tourist attractions and expand related resources to form a tourism industry chain that includes airlines, hotels, transportation, insurance, souvenirs, and other related industries, as well as explore innovative business models to build a stronger tourism industry (Wei et al., 2019).

Thirdly, an efficient tourism crisis management system. Chinese tourism enterprises generally lack crisis management awareness and risk resistance. As a result, establishing an effective early-warning mechanism for tourism enterprises to deal with the crisis is critical, as is taking the initiative to focus on government departments' support policies and subsidies to alleviate their own financial pressure when a public health crisis occurs (Oliver, 1980).

Effective government response measures to tourism crisis events are critical to quickly reducing negative impacts and restoring tourism confidence. As a result, a solid crisis management mechanism is critical. Not only should the government assist tourism enterprises in working together to overcome difficulties, but tourism enterprises must also take the initiative to transform, for example, by adopting new models to promote the transformation of tourism business models, such as takeaway and live broadcast (Ministry of Culture and Tourism of the People's Republic of China, 2022c). This blend of "top-down" and "bottom-up" organizational mobilization effectively encourages tourism enterprises to integrate their own resources, seize opportunities, adjust their industrial structure, reduce losses, and improve their ability to deal with tourism crises.

5. Conclusion

The main research contents and conclusions of this paper are as follows.

First, the development status of China's tourism industry before and after the epidemic is analyzed. Before the arrival of COVID-19, the scale of China's tourism market grew steadily for five consecutive years. In early 2020, the scale of China's tourism market was nearly cut down due to the epidemic. With the pandemic under effective control, China's tourism market is gradually recovering.

Second, the development history of Ctrip is introduced. Ctrip, as the largest online travel company in China, has easily accessible statistical data. Meanwhile, its self-rescue measures are representative of the entire industry.

Third, Ctrip's crisis management program is explored. This paper summarizes Ctrip's operational capabilities, organizational leadership, and organizational culture. Afterward, we select representative self-rescue measures to explore Ctrip's crisis management program and introduce Ctrip's fulfillment of its corporate social responsibility during the pandemic.

Fourth, the countermeasures for tourism development in the post-pandemic era are proposed. This paper proposes that the development of digital tourism, innovative business models, and the corresponding tourism crisis management mechanism can effectively enhance the risk resistance of the tourism industry.

In this paper, Ctrip is selected for a single case study. Ctrip is very representative of online tourism enterprises, but online tourism enterprises are still different from traditional tourism enterprises, so the study lacks comprehensiveness. In future work, we hope to obtain more information on traditional tourism enterprises to improve the study of crisis management in the tourism industry.

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References

100EC. (2021, May 13). China Online Travel Market Data Report 2020. Retrieved from https://www.100ec.cn/zt/2020zxlybg/.

Cai, W. & Han Y. (2003a). Crisis management guide for the tourism industry (one). *Hotel Modernization*, 3, 14–17.

Cai W. & Han Y. (2003b). Crisis management guide for the tourism industry three. *Hotel Modernization*, 5, 26–27.

Cai W. & Han Y. (2003c). Crisis management guide for the tourism industry (two). *Hotel Modernization*, 4, 16–19.

China Tourism Research Institute. (2021, January 1). China Tourism Economy Blue Book (No.13). Retrieved from:

http://www.ctaweb.org.cn/cta/ztyj/202103/99d66a0c083a4fda988bea53d6028d3c.shtml.

General Office of the State Council. (2018). Guidance on the promotion of the development of all-area tourism. Retrieved from: http://www.gov.cn/zhengce/content/2018-03/22/content_5276447.htm.

Han, H., Yi, J., Jun, S., & Ahn, S. (2020). How do followers infer the motives behind an influencer's advertising disclosures? *Asia Pacific Journal of Marketing and Logistics*, 33(5), 1159–1174. DOI:10.1108/APJML-06-2019-0397.

Jun, S. & Yi, J. (2020). What makes followers loyal? The role of influencer interactivity in building influencer brand equity. *Journal of Product & Brand Management*, 29(6), 803–814. DOI:10.1108/JPBM-02-2019-2280.

Kwon, J. H. (2019). Tail risk and the consumption CAPM. *Finance Research Letters*, 30, 69–75. DOI:10.1016/j.frl.2019.03.025.

Lee, Jaeram, Lee, G., & Ryu, D. (2019). The difference in the intraday return-volume relationships of spot and futures: A quantile regression approach. *Economics*, 13(1). DOI:10.5018/economics-ejournal.ja.2019-26.

Lee, Jeongmin, Yi, J., Kang, D., & Chu, W. (2018). The effect of travel purpose and self-image congruency on preference toward airline livery design and perceived service quality. *Asia Pacific Journal of Tourism Research*, 23(6), 532–548. DOI:10.1080/10941665.2018.1483956.

Lee, Y., Yi, J., & Kim, S.-H. (2020). Reciprocal relationship between movies and the movie-themed mobile games. *Korean Journal of Marketing*, 35(2), 39–53. DOI:10.15830/kjm.2020.35.2.39.

Ministry of Culture and Tourism of the People's Republic of China. (2020). Urgent notice on the suspension of tourism business activities for the prevention of pneumonia infected by the new coronavirus in full swing. Retrieved from: http://zwgk.mct.gov.cn/zfxxgkml/scgl/202012/t20201206_918252.html.

Ministry of Culture and Tourism of the People's Republic of China. (2022a, April 22). On the issuance of ice and snow tourism development action plan (2021-2023). Retrieved from:

http://zwgk.mct.gov.cn/zfxxgkml/zykf/202102/t20210210_921552.html.

Ministry of Culture and Tourism of the People's Republic of China. (2022b, April 22). Opinions on promoting the high-quality development of digital culture industry. Retrieved from:

http://zwgk.mct.gov.cn/zfxxgkml/cyfz/202012/t20201206_916978.html.

Ministry of Culture and Tourism of the People's Republic of China. (2022c, May 7). Tourist scenic spots to resume opening epidemic prevention and control measures guide. Retrieved from:

http://zwgk.mct.gov.cn/zfxxgkml/zykf/202012/t20201213_919432.html.

Ministry of Culture and Tourism of the People's Republic of China. (2022d, June 24). China's 2021 Annual Domestic Tourism Data. Retrieved from: http://zwgk.mct.gov.cn/zfxxgkml/tjxx/202201/t20220124_930626.html.

MobTech. (2021). 2020 China ski industry white paper. Retrieved from: https://www.mob.com/mobdata/report/125.

National Bureau of Statistics of China. (2021, June 7). Statistical bulletin on national economic and social development of the People's Republic of China 2019. Retrieved from:

http://www.stats.gov.cn/xxgk/sjfb/tjgb2020/202006/t20200617_1768655.html.

- Oliver, R. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. DOI:10.1177/002224378001700405.
- Park, E., Kim, W.-H., & Kim, S.-B. (2020). Tracking tourism and hospitality employees' real-time perceptions and emotions in an online community during the COVID-19 pandemic. *Current Issues in Tourism*, 1–5. DOI:10.1080/13683500.2020.1823336.
- Shang, X.-F. & Choi, M.-C. (2019). An examination on the development strategy of 'dianping.com' enterprise. TEST Engineering & Management, 81, 538–544.
- Sönmez, S. F., Apostolopoulos, Y., & Tarlow, P. (1999). Tourism in crisis: Managing the effects of terrorism. *Journal of Travel Research*, 38(1), 13–18. DOI:10.1177/004728759903800104.
- Trip.Com Group Limited. (2021, March 16). 2020 Ctrip anti-pandemic report. Retrieved from: https://investors.trip.com/static-files/08bd6175-f635-419c-9b88-f9f4eefe79ff.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. DOI:10.2307/30036540.
- Wei, F.-P., Choi, M.-C., & Shang, X.-F. (2019). A study on the corporate culture of Dianping. *International Journal of Advanced Culture Technology*, 7(4), 69–75. DOI: 10.17703/IJACT2019.7.4.69.
- Yang, H., Lee, J., & Ryu, D. (2018). Market depth, domestic investors and price monotonicity violations. *Applied Economics Letters*, 25(10), 688–692. DOI: 10.1080/13504851.2017.1355539.
- Yi, J. & Oh, Y. K. (2021). Does brand type affect what consumers discuss? A comparison of attribute-based reviews of value and premium brands of an innovative product. *Internet Research*, 32(2), 606–619. DOI:10.1108/INTR-08-2020-0478.
- Yi, J., Yuan, G., & Yoo, C. (2020). The effect of the perceived risk on the adoption of the sharing economy in the tourism industry: The case of Airbnb. *Information Processing & Management*, 57(1), 102108. DOI:10.1016/j.ipm.2019.102108.
- Yu, W., Choi, M., & Zheng, J. (2021). How do different types of entrepreneurial networks and decision-making influence the identification of entrepreneurial opportunities? *Frontiers in Psychology*, 12. DOI:10.3389/fpsyg.2021.683285.

Zhang, X., & Choi, M. C. (2019). Study on the development strategy of ant financial. *International Journal of Financial Research*, 11(5), 262–268. DOI:10.5430/ijfr.v10n5p262.