Effect of COVID-19 on Tourism Stocks in Developing Countries

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Abstract. The sudden beginning of COVID-19 pandemic of 2019 has had an extraordinary influence on the world's tourist economy, especially for some developing countries, as those countries rely on tourism to gain a large amount of their national income. Many scholars believed that this severe pandemic made the tourism stock market more volatile, and a significant decrease in tourism stock prices could always be found. This Paper looks at how the COVID-19 epidemic has affected the tourist stock market in some developing countries. Tourism stocks in China, India, and Thailand will be three examples of countries to discuss in this paper. In the research of this paper, it is observed that COVID-19 negatively affects the tourism stock prices in the market.

Keywords: COVID-19, Tourism Stock, Event Study Methodology (ESM).

1. Introduction

The COVID-19 epidemic spread uncontrollably over the world after the first case was identified in Wuhan in December 2019. By April 24, 2020, there will be 2,631,839 cases that have been verified worldwide, based on the World Health Organization (WHO). The outbreak of this sudden pandemic negatively affected the global economy. The crisis of COVID-19 has caused a 3.4% decline in the world's gross domestic product (GDP) compared to the year prior, with a loss of more than two trillion dollars [1]. This notable slowdown in economic growth is a result of the COVID-19's effects on the output of several industries, the largest of which being the tourism sector. Tourism's accounted for approximately 10.4% of the worldwide GDP in 2018, according to statistics supplied by the United Nations World Tourism Organization [2]. However, the COVID-19 crisis has resulted in global travel bans and lockdown regulation, which have generated a 22% reduction in international tourism in the first three months of 2020, and this decline is anticipated to reach 60% to 80% for the whole year [3].

In addition, tourism is one of the industries with the highest demand for labor. As a result, millions of jobs could be threatened by such a decline in the sector, increasing unemployment [3]. The world travel and tourism council (WTTC) reported that this unexpected epidemic might put the jobs of up to 75 million employees at imminent risk [4]. Another startling estimate provided by WTTC owning to the COVID-19 pandemic's widespread consequences is the industry's catastrophic daily loss of one million employment [4]. Sun et al. exhibited the potential result of COVID-19 fear on employee performance in the hospitality sector in the context of changes in job insecurity and loss of job insecurity brought about by COVID-19. Their study found that fear of COVID-19 was positively related with changes in job insecurity and insecurity about losing one's job, and was detrimentally associated with employees' performance of job [5]. The research by Li et al. showed that the decline in international tourism affects the short-term income disparity within and across countries. They looked at the potential impact of decreasing global tourist consumption on 132 nations' employment in the tourism sector and prospective income loss. [6].

This huge shock to the tourism industry is extremely serious for developing countries, as tourism accounts for a large part of their national income. For example, Ekanayake & Long applied a new method to study the association between tourist expansion and economic development in some developing nations. and found that tourism revenue is positively related to economic growth in developing countries [7]. Foo et al. in their paper showed that the COVID-19 crisis has adversely influenced Malaysia's tourism business, because of a decrease in international travelers and Malaysia's government's travel regulations.[8]. The study by Pramana et al. showed that some provinces in Indonesia have been unable to revive their tourism economies. The Indonesian government has taken some actions to boost the country's tourism economy, but as the number of confirmed cases has grown, these efforts have not been successful [9].

Investigating the fluctuations in the stock market or the price of the relevant assets would be a useful strategy to determine the impact of an event, such as the COVID-19 pandemic, on a particular industry. Thus, in this paper, we will concentrate on the volatility of the tourism stock market in developing countries. The articles are categorized by country. In particular, the tourism stock markets of three representative developing countries - China, India, and Thailand - will be discussed specifically later. Finally, a common conclusion is reached through these three examples.

2. Literature Review

With the help of previous studies, this paper works to describe the possible effects of COVID-19 on traveling-related stocks in developing nations. Tourism stocks in China, India, and Thailand will be the examples discussed in this paper, as tourism plays a vital economic role for these three countries. The approach of Event Study Methodology (ESM) will be mentioned frequently in later sections since it is an efficient financial analytical tool for assessing the influence of a specific event on the value of a company's stock price movements. After that, a multifaceted explanation of how COVID-19es affect tourism stock markets in those three countries will be comprehensively illustrated respectively.

2.1 The influence of COVID-19 on China's stock market for tourism

China, one of the fastest-growing developing countries, relies heavily on tourism for its economic development, as tourism contributes approximately 10.94% to China's overall GDP [9]. According to the statistical data, the COVID-19 crisis has caused the share of tourism in China's GDP to drop to 4.5% in 2020 [10]. Therefore, in the remainder of this section, studies conducted by Liew and Wenmin et al. will be discussed how this disease affects Chinese tourism shares.

Venus Khim-Sen Liew looked into the immediate consequence of COVID-19 on Chinese traveling-related equities by employing the ESM. Liew took the tourism stocks traded on the Shanghai and Shenzhen stock markets as the research subjects and establishes two event dates based on COVID-19 pandemic announcements, one on December 31, 2019, and the other on January 23, 2020. The price behavior of these tourism-related equities indicated that the negative trend did not start until the second event day, January 23, 2020. (the beginning date of the Wuhan blockade). Based on the cumulative average return graphs of these tourism stocks, the results show that most tourism stocks have negative cumulative abnormal return values after January 13, 2020, despite the different fluctuations of each individual tourism stock. Overall, it is found that the COVID-19 epidemic produced a significantly bad effect on the Chinese tourism industry overall, with the price of each tourism stock falling by about 18% to 20% cumulatively during the Wuhan lockdown [2].

Wu et al. also examined how the COVID-19 crisis changed the volatility of traveling-related stock prices. Like Liew's study, the ESM was used in Wu et al.'s study. They set the date of January 10, 2020 to be the event day, and the estimation window (a time period earlier than the event window that helps to calculate normal returns without market shocks [11].) is from March 28, 2019, to December 20, 2019. In addition to demonstrating the adverse effects on AARs and CAARs, Wu et al. explore the consequence of government action on stock returns in the tourism industry during the COVID-19 period through quantile regression analysis. In particular, a key finding is that there is a nonlinear link between government activity and the return of Chinese tourist stocks, and that government measures may effectively reduce shocks to those companies' returns [12]. Moreover, it demonstrates that the adverse effect of the COVID-19 Pandemic on Chinese traveling-related stocks diminishes along with the decrease of the quantile level, with some government actions [12].

2.2 The influence of COVID-19 on India's stock market for tourism

The sector of tourism is greatly crucial for Indian economic development. In 2019, India's tourism sector created approximately 4.2 million jobs, accounting for 8.1% of total Indian employment [13]. Nevertheless, the COVID-19 epidemic of 2020 effectively halted the expansion of India's tourist industry. In the rest of this section, studies conducted by Pandey & Kumar and Jawed et al. will be discussed how the COVID-19 pandemic affects Indian tourism stocks.

Pandey & Kumar's paper covers the behavior of 30 listed travel stocks in India by applying the ESM method. The authors set figures of AAR and CAAR based on two important events, one on March 24, 2020, the date of the implementation of the nationwide lockdown, and the other on May 31, 2020, the date of the unlock 1.0. For the first estimation window, the abnormal return is positive on the event day. That is due to the positive sentiment that the Indian stock market viewed initially, as the implementation of a nationwide lockdown controls the spread of Covid-19. However, the figure shows that the abnormal returns go more negative after the event day. For the second estimation window, investors' negative sentiment causes the abnormal returns of travel stocks to experience more negative effects. In summary, Pandey & Kumar's study reveals a negative association between the COVID-19 epidemic and the liquidity, volatility, solvency, and size of the Indian tourism stock market, reducing abnormal returns [14]. It is also concluded that investors' sentiment might affect the stocks' abnormal returns in the market in response to this severe pandemic [15]. In particular, Rupande et al. find that the stock fluctuation is sentiment-driven by applying the GJR-GARCH model [16]. Chen et al. looked into the effect of the SARS epidemic on the Taiwan' equity price movement and found that a pandemic disease adversely interacts with stock returns in the hotel, tourism, wholesaler, and retail sectors [17].

Jawed et al. also explore the performance of Indian tourism stocks in two stages in their study. Similar to Pandey & Kumar's study, jawed et al. applied the ESM in the first stage. However, the difference is that Jawed et al. investigate the stock returns of only one tourism (HT) company and consider the impact of a larger number (five) of event days on it. The second step makes use of a multivariate regression approach to look at firm-level advantages and disadvantages that account for the cross-sectional variance in abnormal equity returns at different stages of the COVID-19 pandemic in the HT company. [18]. The study shows that the HT firm experiences negative abnormal returns during this long-term severe epidemic. Even though this reaction is relatively flat in the early period, the WHO announcement on 11 March 2020 leads to the sharpest decline in the HT sector as a whole.

2.3 The influence of COVID-19 on Thailand's stock market for tourism

Thailand receives a significant amount of revenue from the tourism sector every year. Statistics show that in 2019, tourism contributed approximately 3,028 billion baht to Thailand's GDP. However, under the disadvantable effects of the COVID-19 crisis, this figure falls to 883 billion baht in 2020 [19]. In the remainder of this section, the study by Chancharat & Meeprom and Faroop et al. discusses how this widespread epidemic changed the fluctuation of tourism equity prices in Thailand.

Chancharat & Meeprom examined the COVID-19 crisis' economic effect on Thailand's hospitality and traveling businesses using data from the Stock Exchange of Thailand (SET) index. According to their research, this unprecedented pandemic produced a detrimental consequence on equity returns in hotel and tourism sectors, and stock returns was badly related to the daily increase in the number of total confirmed cases [20]. However, the outcome of the study is somewhat constrained since it did not fully account for companies involved in hospitality and tourism, such as restaurants, airlines, and hotels, which may be differentially impacted by the COVID-19 epidemic. Nevertheless, the research of Carter et al. helped solve this limitation. Carter et al.'s paper investigated the factors utilized by the market participants to price information into the hotel, airline, and tourism stock prices. Their study found that larger companies with stronger market-to-book ratios and cash reserves saw fewer negative returns, whereas those with more leverage suffered more detrimental influence of the COVID-19 Pandemic [21]. Moreover, Deb tried to utilize a new approach that used Twitter data and

Google Trends to build a predictive model to explore the stock price fluctuation of three airline companies [22].

Faroop et al. focused on the abnormal returns of the transport and tourism services sectors in developed and developing countries (including Thailand) under the situation of the covid-19 crisis. In their research, the approach of ESM was utilized, and seven event days (announcements) were set to be observed. To determine abnormal returns, the authors considered data from 1 January 2020 to 31 May 2020 (101 days). Their study found that the CAAR in developing countries (Thailand) was not significant during the observation period, because of the high volatility of stock return [23]. Their result furthermore demonstrated that Thailand-based businesses in developing nations had noticeably negative anomalous returns as a result of COVID-19's second wave [23]. However, their research still has some limitations. Specifically, their study only covered the influence of COVID-19 crisis on share returns 100 days after the first case was announced. The third, fourth, and fifth COVID-19 waves' further effects were not looked into.

Table 1. Studies on COVID-19's effects on tourism stocks.

Country	Author(s)	Main propositions/findings
China	Liew, Venus Khim-Sen	• The COVID-19 pandemic caused the share prices of various Chinese tourism stocks to fall by around 18% to 20%.
China	Wenmin Wu, Chien-Chiang Lee, Wenxu Xing, Shan-Ju Ho	• The COVID-19 crisis adversely affected the tourism-related stocks, and the government intervention could effectively mitigate this negative impact.
China	Wang Yiwei, Khakan Najaf, Guilherme F. Frederico, Osama F. Atayah	• investors in China may benefit from portfolio diversification by making investments with medium-term investment holding periods (16-64 days).
India	Dharen Kumar Pandey, Rahul Kumar	• The COVID-19 epidemic has a detrimental effect on the liquidity, volatility, solvency, and size of the Indian tourism stock market, and sstock prices in the market are driven by investor sentiment.
India	Mohammad Shameem Jawed, Archit Vinod Tapar, Amol S. Dhaigude	• The COVID-19 pandemic caused Indian tourism stock market (HT firm) experienced negative abnormal return.
Thailand	Surachai Chancharat, Supawat Meeprom	• The COVID pandemic was badly associated with stock returns in the travel and hospitality sector, and the daily increase in the total confirmed COVID-19 cases is significantly inversely correlated with stock market performance.
Thailand	Umar Farooq, Adeel Nasir, Bilal, Muhammad Farhan Bashir	• The second wave of COVID-19 had a significant negative anomalous return on investment for companies in developing countries (Thailand).

3. Conclusion

The global tourist sector is facing enormous challenges due to the COVID-19 epidemic, particularly in developing nations. Researchers should look at how COVID-19 has affected the tourist sector since they may be able to provide some wise suggestions or come up with some workable solutions to lessen these effects. This paper indicates COVID-19's immediate effects on the travel sector, using China, India and Thailand as examples. In general, in the stock markets of these three countries, there was a significant decline in tourism stock prices following major events related to COVID-19, although the exact dates of the decline in stock prices differed slightly in these three countries. For future research, it will be necessary to focus on the long-term result of the COVID-19 crisis on the traveling-related share market and to study its recovery.

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