Impacts and restoration strategy of the tourism industry post-COVID-19 pandemic: evidence from Vietnam

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Abstract

Purpose – This paper presents the impact of the COVID-19 pandemic on Vietnam’s tourism industry to propose appropriate recovery strategies in the future.

Design/methodology/approach – This study uses a combination of research methods. Data were collected from the Ministry of Culture, Sports and Tourism, General Statistics Office, Vietnam National Administration of Tourism and Ministry of Health. Non-parametric statistical methods were applied to analyze the differences between epidemic and non-epidemic periods and find correlations between the number of infections and data related to the performance of the tourism industry. In-depth interviews with 20 people linked to tourism activities were conducted to analyze the impacts and propose strategies for future recovery.

Findings – The results demonstrate the severe impact of the pandemic on Vietnam’s tourism industry based on a decrease in the number of visitors, business activities, revenue and employment rate. Therefore, to recover tourism – Vietnam’s key economic sector in the future – developing reasonable strategies to build a safe tourism environment, building a sustainable tourist market, diversifying and improving tourism high-quality tourism products, marketing, human resources, digital transformation and sustainable tourism are necessary, along with the development trend of the industry after COVID-19.

Originality/value – This paper synchronously and systematically presents the effects of COVID-19 on Vietnam’s tourism industry based on official data. Strategies are proposed to handle these effects on a reliable scientific basis. This study can be considered a valuable reference for researchers and managers of tourism in developing countries, such as Vietnam.

Keywords Tourism, COVID-19 pandemic, Recovery strategy, Vietnam

Paper type Research paper

Introduction

The coronavirus disease (COVID-19) pandemic was first detected in Wuhan in December 2019 and quickly became a global pandemic in March 2020. COVID-19 has led to a rapid global health crisis resulting in economic shock (Churski et al., 2021), including shocks that affect the tourism industry. Undoubtedly, COVID-19 is one of the most significant events of the 21st century (Zenker et al., 2021). During the COVID-19 pandemic, the global tourism industry has faced an unprecedented crisis (Sharma et al., 2021). Countries are taking tight countermeasures to control the spread of the disease by restricting travel and closing national borders (Villacé-Molinero et al., 2021). Tourism demand plummeted because of the impact of COVID-19. In fact, according to a report by the World Tourism Organization (UNWTO), international tourist arrivals (overnight visitors) fell by 72% from January to October 2020 compared to the same period last year (back to levels of 30 years ago), curbed by slow virus containment, low traveler confidence and essential restrictions on travel due to the pandemic. The estimated decline in international tourism in 2020 is equivalent to a loss of approximately 1 billion arrivals and US$1.1 trillion in international tourism receipts. This...
plunge in international tourism could result in an estimated economic loss of over US$2 trillion in
global GDP, which is more than 2% of the world’s GDP in 2019 (UNWTO, 2020). The impact of
COVID-19 on the tourism industry has highlighted its vulnerability to global disasters (Jiang and
Ritchie, 2017). The Organization for Economic Co-operation and Development predicts that
 tourism will be among the last sectors of the economy to recover lost demand after finally
controlling COVID-19. However, COVID-19 can also be regarded as a rare and invaluable
opportunity for the tourism industry to rethink and restore the direction of more inclusive,
sustainable and responsible development for the future (UNWTO, 2020; Higgins-Desbiolles, 2020).

Owing to abundant natural and human tourism resources, Vietnam is known as an attractive tourist
destination. In 2019, the country welcomed 18.1 million international tourist arrivals, surpassing
Indonesia (16.1 million). It rises to the fourth position in Southeast Asia, after Thailand, Malaysia and
Singapore (19.1 million). The tourism industry contributes over 9.2% of the GDP, creating 2.9
million jobs, including 927,000 direct jobs in 2019 (VNAT, 2021a, b, c; Tuan, 2020). The World
Tourism Organization ranked Vietnam sixth out of the 10 countries with the fastest growth rate
globally (Tuan, 2020). However, in January 2020, the country recorded its first confirmed case of
COVID-19, and the number of COVID-19 infections tended to increase continuously over time. The
emergence of the pandemic quickly “froze” Vietnam’s tourism industry. The rapid decline in the
number of visitors, business activities, revenue and employment rate has caused significant losses
to the country’s tourism industry and economy.

The main objective of this study was to assess the impact of the COVID-19 pandemic on Vietnam’s
tourism industry based on statistics and interview practices and to propose effective recovery
strategies for the post-COVID-19 tourism industry. Therefore, three research questions must be
addressed:

1. How severe is the effect of the COVID-19 pandemic to Vietnam’s tourism industry?
2. What are Vietnam’s response policies to the tourism industry during the pandemic?
3. What strategies should be implemented to effectively recover the country’s tourism industry
    after the pandemic?

**Methodology**

The authors used a combination of quantitative and qualitative research techniques. These two
approaches allow the authors to gain a deeper insight into the impact of the COVID-19 pandemic
on the tourism industry and to have more practical and scientific bases to propose strategies to
recover the country’s tourism industry after COVID-19.

**Quantitative research**

Quantitative research was conducted based on the collected secondary data. Data on Vietnam’s
tourism industry (e.g., tourists, revenue, labor, calendar businesses) during the epidemic-free
period (from December 2019 and earlier) and the epidemic period (from January 1, 2020) were
collected from the General Statistics Office (GSO), Vietnam National Administration of Tourism
(VNAT) and Ministry of Culture, Sports and Tourism (MCST). The number of confirmed COVID-19
cases from January 2020 to May 2021 was obtained from the Ministry of Health (MOH). The author
used a non-parametric statistical method to solve the following specific issues:

1. The Mann–Whitney U test was conducted to compare the differences between two
   independent groups. This test was performed to answer the question of whether any
   significant difference exists in the number of tourists, revenue and employment rate in the
   tourism industry in Vietnam between the epidemic and non-epidemic periods. The hypothesis
   (Ho) is that no difference exists in the number of visitors, revenue and employment rate in the
   tourism industry during the epidemic and non-epidemic periods. The alternative hypothesis
(H1) is that a difference exists in the number of visitors, revenue and employment rate in the tourism industry during the epidemic and non-epidemic periods.

2. The Friedman test was conducted to determine the difference between groups when the measured variable was ordinal. It was used in this study to answer the question over time regarding the increasingly severe course of the epidemic: Is there any difference in the number of visitors, revenue and employment rate in the tourism industry? The hypothesis is that no difference exists according to the evolution of the epidemic.

3. The Spearman test verified the relationship between two ranked variables: one typed and one measured. In this study, the test was used to examine the association during the epidemic period. A negative correlation was observed between monthly cases and visitors, revenue and employment rates.

**Qualitative research**

Considering that the COVID-19 pandemic remains complicated on a global scale and its impact on socioeconomic and environmental aspects is still not clearly defined, qualitative research through interviews and focus group discussions is considered relatively suitable for uncovering essential concepts that can go beyond the mere statistical analysis of quantitative research methods (Bernard, 2017; Silverman, 2009). Qualitative data were collected by interviewing 20 participants. They are experts and employees in tourism with high professional qualifications, capable of giving opinions to ensure transparency and objectivity in research content (see Table 1). Face-to-face interviews were conducted. However, some interviews were conducted online via Zoom cloud meeting software for safety reasons and geographical distance. The interviews were conducted from January to March 2021.

This study adopted a semi-structured interview method to collect information. The interview script was divided into two parts (see Appendix). Initially, the interviewer was asked to give a general

| Table 1 | Demographic characteristics of the interviewees |
|---------|-----------------------------------------------|
| **Experts** | | | | |
| Interview | Age | Gender | Tourism experience (in years) | Job position | Location |
| 1 | 52 | M | 26 | Manager in MPI | Hanoi |
| 2 | 45 | F | 20 | Manager in MCST | Hanoi |
| 3 | 40 | F | 18 | Manager in MCST | Hanoi |
| 4 | 56 | M | 30 | Manager in VNAT | Hanoi |
| 5 | 38 | F | 8 | Manager in VNAT | Hanoi |
| 6 | 41 | F | 15 | Manager in DT | Ho Chi Minh City |
| 7 | 42 | M | 12 | Manager in DT | Hanoi |
| 8 | 36 | F | 10 | CEO of travel agency | Danang |
| 9 | 37 | M | 15 | CEO of hotel (4 star) | Hue City |
| 10 | 50 | M | 18 | CEO of travel agency | Hanoi |
| **Employees** | | | | | |
| 11 | 24 | M | 2 | Tour guide | Hanoi |
| 12 | 33 | M | 11 | Tour guide | Hanoi |
| 13 | 28 | F | 5 | Receptionist | Hanoi |
| 14 | 40 | F | 10 | Tour operators | Hanoi |
| 15 | 36 | F | 6 | Bartender | Quangninh |
| 16 | 26 | F | 5 | Receptionist | Quangninh |
| 17 | 25 | M | 3 | Tour guide | Hue City |
| 18 | 38 | F | 10 | Tour guide | Danang |
| 19 | 42 | M | 15 | Tour operators | Ho Chi Minh City |
| 20 | 26 | M | 3 | Receptionist | Ho Chi Minh City |

**Note(s):** MPI: Ministry of Planning and Investment; MCST: Ministry of Culture, Sports and Tourism; VNAT: Vietnam National Administration of Tourism; DT: Department of Tourism
introduction about their age, job position, location and work experience in the tourism industry. The interview topic was focused on the impact of the COVID-19 pandemic on the tourism industry and expectations for post-pandemic tourism recovery. For the expert group, the questions also extended to the content of trend identification, development of the tourism industry after the pandemic and suggestions for developing strategies to recover the tourism industry. The interviews were recorded with participants’ permission, and their personal information was kept confidential. The interview data provide the author a basis for clarifying the impact of the pandemic on the tourism industry. Simultaneously, there are more grounds to propose development strategies suitable for Vietnam’s tourism industry post-COVID-19.

Results

Descriptive statistics analysis

Impact on tourists and revenue. After the high growth momentum before the outbreak of the COVID-19 pandemic, Vietnam’s tourism industry had an average growth rate of 22.7% in 2015–2019, from 7.9 million visitors (in 2015) to 18.1 million visitors (in 2019). However, the number of international visitors is continuously decreasing due to the outbreak of the pandemic. In 2020, Vietnam only received 3.8 million visitors, a decline of 79.5% compared to the same period in 2019 (see Figure 1). Following the downward trend from 2020, in the first 6 months of 2021, international visitors to Vietnam were estimated at only 88,200,000 arrivals, down 97.6% over the same period last year (VNAT, 2021c).

In general, international visitors to Vietnam by air in 2020 accounted for 80.3% and decreased by 78.6% compared to that in 2019, visitors coming by road decreased by 81.9%, and arrivals by sea decreased by 45.2%. In 2020, visitors to Vietnam from Asia accounted for 73.3% of the total international arrivals, a decrease of 80.4% compared to that of the previous year (see Figure 2). Visitors from all major markets decreased sharply: from China, 83.5%; Korea, 80.4%; Japan, 78.4%; Taiwan, 78.8%; Cambodia, 46.6%; and Malaysia, 80.7%. Meanwhile, visitors from Europe in 2020 decreased by 69%, and those from the Americas decreased by 75.7% compared to that in 2019 (VNTA, 2021b).

Vietnam’s domestic tourists in 2020 decreased by 34% compared to that in 2019, from 85 million (2019) to 56 million (2020) (see Figure 1; VNAT, 2021c). Some localities prospered to welcome domestic tourists in the first quarter of 2021, however, the COVID-19 epidemic continues to break out. Therefore, the number of domestic visitors in the first 6 months of 2021 was only 30.5 million (VNAT, 2021c).

Figure 1 Changes in the number of tourists of Vietnam in 2016–2020

![Figure 1](image-url)
Owing to the rapid decrease in the number of tourists, the total revenue from tourists in 2020 also decreased sharply. In 2020, Vietnam’s revenue from tourists only reached 312,000 billion VND, which is 58.7% lower than that in 2019. Meanwhile, the country’s total tourist revenue decreased in the first 6 months of 2021, reaching only approximately 134,000 billion VND, a decline of 24.2% over the same period in 2020 (VNAT, 2021b, c).

**Impact on accommodation and travel business**

The prolonged COVID-19 pandemic has severely affected thousands of Vietnamese tourism businesses. Tourism businesses have fallen into a state of exhaustion and no longer have the resources to maintain minimum operating conditions. Challenges accumulate when most companies have debts with banks and are almost unable to pay in the current period.

In 2020, only 201 travel businesses applied for new licenses, a decline of more than one-third, compared to the number of new ones in 2019 (725 enterprises). The number of firms that used revocation increased by threefold. In 2020, over 338/2519 international travel businesses have applied to have their licenses revoked, and 90% of them closed. Large enterprises arrange only about 30% of the staff on duty at their physical stores. Employees are given unpaid leave, or their salary are reduced to 80%. In 2021, the number of travel businesses applying to have their travel business licenses revoked accounted for nearly 30% of the total number of licensed companies. Currently, only about 2,200 firms have travel business licenses nationwide, of which many are still closed or shutdown due to a lack of tourists (VNAT, 2021c).

The accommodation sector was the first and most affected segment due to the COVID-19 pandemic’s onset in early 2020. In the tourism industry’s revenue structure, the accommodation and catering businesses had the most significant proportion (in 2019, accounting for 46%), resulting in an extensive damage to the tourism industry. By the end of June 2021, the gathered data are 37,000 accommodations, with 780,000 rooms. The average occupancy of the entire country in the first 6 months of 2021 is only 15%, which is less than 10% in many places. After a period of moderate operation, many establishments had to close (VNAT, 2021c).

The COVID-19 pandemic has had a different impact on tourism facilities depending on their type, size and quality. For 3-4-5-star and equivalent tourism facilities, most of them have deep discounts, transform markets, attract domestic customers and experts and a few suspend businesses that
operate moderately (VNAT, 2021c). Due to the characteristics of serving mainly domestic tourists, tourism facilities with 1–2 stars and equivalent or less operate in moderation. Most homestay community tourists do not even have guests. Further, shared housing systems using technology platforms, such as Airbnb, have mostly stopped working.

**Impact on tourism employees**

According to the GSO, employees in the tourism industry have been the most affected by the COVID-19 pandemic. In 2020, approximately 60% of the employees of Vietnam’s tourism industry lost their jobs due to closure of borders and restriction of domestic travel caused by the COVID-19 outbreak. The number of employed workers in the sector fluctuates by only around 30–40% (GSO, 2020). In 2021, the unemployment rate in the tourism industry continued to increase, reaching approximately 90% of the total number of employees in travel businesses and 70–80% of workers in accommodation establishments (VNAT, 2021c).

**Inferential statistics analysis**

**Analysis of differences.** According to the results of the Mann–Whitney U test, the number of tourists (international and domestic), revenue and employment rate during the epidemic period was significantly different from those in the non-epidemic period. The disparity is concentrated in the number of international tourists, revenue and employment in the tourism industry, which is the largest (see Table 2). The results show that the COVID-19 pandemic has significantly reduced the number of tourist arrivals in Vietnam. The difference in the number of visitors, revenue and employment rate in the tourism industry between the epidemic and non-transition periods requires the government of Vietnam to control the epidemic to restore tourism activities effectively. Simultaneously, a strategic solution is necessary to increase tourist attractions, emphasizing that “Vietnam is an attractive and safe destination.”

According to the results of the Friedman test, a substantial difference existed in the number of international tourists and revenue over time. This indicates that, when the epidemic becomes increasingly severe (through two outbreaks in 2020), this difference becomes more extensive and significant than when epidemic did not emerge (see Table 3).

**Correlation analysis**

The results of Spearman’s rank correlation analysis indicate that the rate of negative correlation is significant between the number of visitors and that of recorded cases by month, but the other variables were not significant. Thus, evidently the Spearman test is true to the actual situation, with a negative correlation between the number of infected cases and that of tourists, the outbreak of the disease and the number of tourists decreasing due to the increasing awareness of epidemic prevention. Therefore, tourism planners and managers, along with the government of Vietnam, must promote propaganda on safe epidemic prevention measures and raise public awareness to

| Table 2 | Difference of measuring variables in epidemic and non-epidemic periods (comparison between 2019 and 2020) |
|---------|--------------------------------------------------------------------------------------------------|
| Tourism variables | Epidemic period | Non-epidemic period | P-value |
| International tourists (millions of visits) | 3.8 | 18.1 | 0.001* |
| Domestic tourists (millions of visits) | 56 | 85 | 0.042* |
| Revenue (billion VND) | 312 | 726 | 0.001 |
| Labor (million people) | 1.3 | 0.52 | 0.001 |

Note(s): * and ** indicate significance at the 5% and 1% levels, respectively.
contribute to disease control. This aims to reduce the negative correlation between the number of tourists and the evolution of the pandemic (see Table 4).

**Interview analyses**

The summary of the results of interviews with 10 experts and 10 employees in the tourism sector indicates that they all believe that Vietnam’s tourism industry is greatly affected by the COVID-19 pandemic. The pandemic has placed tourism businesses and employees in more difficult situations than ever before.

The COVID-19 pandemic has forced most travel businesses to transform their business models or hibernation. “100% of the instructors at the company are out of work during the outbreak [...], now because resources have been exhausted, businesses are forced to give employees a break, only retaining the core force with working partners to ensure the best interests of customers” (Interviewer No. 8). Similarly, the 7th interviewer said, “The company’s revenue is currently zero. The company is forced to give 80% of its employee’s unpaid leave, keeping only key personnel” (Interviewer No. 9).

According to tourism workers, about 80% are currently unemployed (62.5% were unemployed in 2020, and 37.5% remained unemployed in early 2021). “It’s a pity to take a break, but the tourism industry is still struggling, I do not know when it will recover. Also, because of life, I had to change jobs” (Interviewer No. 16). “Over ten years in the profession, never before have we experienced such great mental crisis, we are almost exhausted, tired [...] now the company has cut 90% of its workforce only retained some key positions to maintain” (Interviewer No. 14). Currently, most tourism workers who have lost their jobs have moved to other jobs or have attempted to find new jobs. Among the respondents, only 20% of the employees were still working in the tourism industry with a salary of 80%, while 62.5% had switched to other fields, such as business and tourism, online business, teaching, real estate business and shipping. However, up to 37.5% of employees did not find a new job. Life has been challenging because of the loss of the primary source of income. “Many tourism workers, after being cut, have found a suitable job, have the same income as before, and their passion for tourism has disappeared which is making them no longer need to return to the industry” (Interviewer No. 18). When they found a new job, about 60% of the employees answered that they did not consider returning to the tourism industry when the pandemic is under control. This poses a significant challenge in the future when the tourism industry is revived. There may be a significant shortage of human resources, especially for high-

| Table 3 | Differences in the performance of the tourism industry according to the months of the epidemic |
|---------|---------------------------------|---------|---------|---------|--------|
| Tourism variables | February 2020 | March 2020 | April 2020 | P-value |
| International tourists (millions of visits) | 1.400 | 450 | 26.2 | 0.001 |
| Revenue (billion VND) | 45.5 | 35.2 | 17.6 | 0.035 |

| Table 4 | Relationship between the number of infections and the variables of the tourism industry |
|---------|---------------------------------|---------|---------|---------|--------|
| Spearman rho | International tourists | Domestic tourists | Revenue | Labor |
| International tourists | 1 | -0.092*** | 0.129** | 0.182 |
| Domestic tourists | -0.092*** | 1 | 0.562** | 0.460** |
| Revenue | 0.129** | 0.562** | 1 | 0.879** |
| Labor | 0.182 | 0.460** | 0.879** | 1 |

Note(s): *p < 0.01; **p < 0.05
quality human resources who have specific skills wherein the training cannot be done in a short time.

**Vietnam’s policy response to the tourism industry during the COVID-19 pandemic**

From the first recorded case in January 2020 to May 31, 2021, Vietnam has a total of 7,312 confirmed cases, including 4,224 active patients, 47 deaths and 3,030 recoveries (Table 5).

In terms of distribution, all provinces and cities of Vietnam have recorded different numbers of COVID-19 cases. The regions with the highest number of cases are Bac Ninh, Da Nang, Ho Chi Minh City and Ba Ria–Vung Tau, which are also important tourist centers in Vietnam (see Figure 3).

In response to the COVID-19 pandemic, the government of Vietnam and stakeholders have implemented prevention and control measures to reduce the spread of the disease in the community (see Table 6). The quick and timely response of the Vietnamese government has contributed to minimizing the negative impact of the pandemic on Vietnam’s socioeconomic status in general, and particularly the tourism industry.

The MCST has a plan to issue specific instructions on disease prevention measures at attractions to ensure tourists’ safety and simultaneously launched the program, “Vietnamese people travel to Vietnam.” The program’s goals are to stimulate domestic tourism, promote communication and promote safe destinations for epidemic prevention and control during the period when the epidemic is under control.

In general, Vietnam’s response policies to the pandemic in 2020 and the first half of 2021 have been relatively successful. The promulgation of strict guidelines, zoning and isolation of infected cases have helped Vietnam control the epidemic situation (as of May 2021). However, for sustainable socioeconomic development in general, the country’s tourism industry particularly should have more appropriate adaptation strategies to the new situation to prevent the epidemic while not harming social and economic development.

Strategy to recover Vietnam’s tourism industry post COVID-19.

In this section, we propose a strategy for the recovery of the tourism industry after the COVID-19 pandemic. Based on the trend of post-pandemic tourism development, the actual impact of the pandemic on Vietnam’s tourism industry and the opinions of participating experts, we propose strategies as a reference for the following activities.

1. **Building a safe tourism environment**: The medical crisis caused by the COVID-19 pandemic has had a significant impact on the psychology of most tourists when deciding to travel. Therefore, a safe tourism environment should be established to attract tourists after the pandemic. These safe tourism aspects include safe destination, safe accommodation facilities and service providers, ensuring the prevention of the disease according to the Ministry of Health and World Health Organization and tourists having complete information and knowledge about disease prevention.

2. **Tourism market development strategy**: The existence of the COVID-19 pandemic has significantly changed the needs and psychology of tourists. “Tourists tend to choose

| Table 5 | Number of COVID-19 infections in Vietnam (May 31, 2021) |
|---------|-------------------|
|         | Apr. 20 | Jun. 20 | Aug. 20 | Nov. 20 | Jan. 21 | Apr. 21 | May 21 |
| Total Confirmed | 270 | 355 | 1,044 | 1,346 | 1817 | 2928 | 7,312 |
| Total active | 48 | 25 | 303 | 132 | 325 | 377 | 4,224 |
| Total deaths | 0 | 0 | 34 | 35 | 35 | 35 | 47 |
| Total Recovered | 222 | 320 | 707 | 1,179 | 1,457 | 2516 | 3,030 |

Source(s): MOH (2021)
destinations with a short distance, in the region or the country with a shorter period instead of choosing a distant tourist destination to ensure health safety factors health, save budget, reduce risks and be more proactive in unexpected situations” (Interviewer No. 1). Therefore, the strategy is to develop a domestic tourist market by combining international calls with high affordability. To stimulate tourism demand in the domestic market, there is a need to actively develop new products and services, improve professionalism in customer service and provide promotions and discounts. Meanwhile, the international tourist market should focus on markets that are high paying and already have vaccine passports, such as the US, European countries, Australia, New Zealand and countries such as South Korea and Japan; next to the traditional visitor market is China.

Source(s): MOH, 5/2021
3. **Strategy of diversifying and improving the quality of tourism products:** “The demand for tourism after the social distancing will be huge [. . .] the preferred destinations for tourists will be the destinations to peace, away from crowded destinations” (Interviewer No. 8). Therefore, after the pandemic, Vietnam’s tourism product development strategy must focus on developing natural tourism products, such as sea tourism and unspoiled islands, which are less affected by humans. Another strategy is developing cultural products associated with heritage and festivals, visiting local areas and learning about local culture and lifestyle, and developing craft village tourism and community tourism combined with a homestay. New types of tourism, especially healthcare tourism, convalescence tourism, and MICE tourism, might greatly attract tourists after the pandemic.

4. **Innovating marketing activities:** After the COVID-19 pandemic, Vietnam’s tourism marketing strategy should focus on the message such as “Enjoy peaceful Vietnam” and hashtag #VietnamSafe to convey that Vietnam is a safe and reliable destination with a high sense of epidemic prevention. Another technique is segmentation of guest markets, and this includes domestic tourists (focusing on the middle-class segment, middle- and high-end income, family, resort), tourists from Southeast and Northeast Asian countries (high-income customer
groups; entertainment and relaxation needs after the stressful lockdown; golf, beach tourism, relaxation tourism), tourists from China (high-income segment, traveling with families or small groups, high-end resort tourism, high demand) and tourists from Europe and North America (medium income, seeking safety and peace, traveling in small groups, family or friends).

5. **Strengthening digital transformation in tourism:** To recover Vietnam’s tourism industry after COVID-19, there is a need to improve digitization of tourism data, build a tourism information system, promote the general application of digital technology for tourism marketing and innovative destination management, connect data with related industries and develop experience-related applications on Internet platforms (e.g., visual tour or interactive) are necessary.

6. **Strategy to maintain and develop human tourism resources:** After the COVID-19 pandemic, Vietnam’s tourism industry will likely lack a highly qualified workforce because many human resources during the pandemic transitioned to other professions. Therefore, the tourism industry should implement a strategy to maintain and gather human resources by supporting monetary policies and providing training on practical career skills by experienced professionals. Other techniques are innovating teaching-related theories with suitable content, applying new technologies in training and empowering employees.

7. **Support strategies for tourism businesses:** Particularly, 7 out of 10 of the experts interviewed suggested that there should be a support strategy from the government for tourism businesses. “Government should be tax exemption and reduction policies for tourism businesses, applying electricity prices according to the unit price of electricity produced for restaurants, tourist accommodation services instead of using service rates service” (Interviewer No. 8). The government’s strategy to support tourism businesses should focus on financial support policies (e.g., exemptions, tax breaks, fees for companies), training support policies (e.g., organizing training programs and fostering human resources to support businesses to ensure the quality of resource supply for the tourism industry) and policies to help logistics associated with tourism.

8. **Developing tourism toward green growth:** After COVID-19, tourists tended to be interested in green tourism activities, low carbon emissions and environmentally friendly green destinations. Therefore, Vietnam should transform its tourism development model toward sustainability to attract tourists after the pandemic. It should also focus on developing tourism activities toward nature conservation and restoration, creating green spaces with less greenhouse gas emissions and bringing more benefits to indigenous communities.

**Conclusion**

In this paper, we presented the impact of the COVID-19 pandemic on Vietnam’s tourism industry and proposed strategies for its recovery after COVID-19.

The effects of the COVID-19 pandemic on Vietnam’s tourism industry were analyzed based on two data sources from state agencies, and interviews were conducted by the author in early 2021. Results of the non-parametric test method used in this study indicate the large difference of Vietnam’s tourism industry before and during the pandemic. The tourism indicators (i.e., number of visitors, revenue and employment rate) tended to decrease compared with the pre-pandemic period. Consequently, the overall economic efficiency of the tourism industry has declined, and its role in national economic growth has been reduced. The analysis results also show a negative correlation between the number of cases confirmed and that of tourists who travel. With more issues identified, the number of people traveling decreases due to psychological reasons, fear of pandemic-related problems and border closure policies of countries. However, due to limited statistical data sources, in the correlation analysis, new statistics only shows that the number of infections is inversely proportional to the number of tourists in a month. Regarding sufficient statistics and time, the author believes that the analysis will fully reflect the impact of the pandemic...
on Vietnam’s tourism industry and will help the tourism industry. Authorities have promulgated policies to proactively and promptly respond and adapt to the complicated developments of the pandemic. Additionally, the impact of the COVID-19 pandemic on the tourism industry was evaluated and analyzed by the authors based on the opinions of 10 reputable and experienced experts in policymaking and research and development in tourism business and 10 highly qualified and senior workers in the profession. The experts and employees share the same view in that COVID-19 caused significant damage to Vietnam’s tourism industry. The expert group assessed the impact of the pandemic on the tourism industry in a broad manner. Conversely, employees focused on the effects of the pandemic on employment and income and hope that it can be controlled so they can go back to work. Further, combining interview data and statistics was important to the author during the research process. The interviews gave the authors sufficient strategies to practically and effectively recover Vietnam’s tourism industry after COVID-19. Based on statistical analysis and consultation with experts and employees, we proposed eight sets of strategies to help the tourism industry recover after the pandemic. These strategies are related to the following: safe tourism environment, tourism market development, marketing strategy in a new context, digital transformation in tourism, human resource development, systems on supporting mechanisms and policies and tourism development toward green growth.

As the COVID-19 pandemic continues to have complicated effects both worldwide and in Vietnam, it can be surmised that Vietnam’s tourism industry may take 2–3 years, perhaps even longer, to fully recover. However, the government is determined to address the pandemic, and stakeholders have a consensus in the development of the tourism industry, combined with the rational use of well-founded recovery strategies for the recovery of Vietnam’s tourism industry promptly.

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Appendix

Part I. Demographics
1. Gender
2. Age
3. How many years have the respondents worked in tourism?
4. Current job positions
5. Where (in which city) does the respondent work?

Part II. List of interview questions:
1. Question for expert
   - The COVID-19 pandemic has created unprecedented changes in the tourism industry. Could you tell us about the differences in Vietnam’s tourism industry before and during the pandemic? Please tell us about the specific damages to the unit under your management.
   - Please tell us about the limitations and challenges that Vietnam’s tourism industry has faced during the COVID-19 pandemic.
   - How did your business/unit maintain its recovery direction during the pandemic period when it is controlled?
   - Based on your opinion, should the Vietnamese government have supportive policies so that the tourism industry can maintain and recover from the pandemic?
   - After the COVID-19 pandemic, the tourism industry experienced drastic changes. How do you think the tourism behavior of Vietnamese people changes? What strategies should the tourism industry have to adopt to such changes?
   - What do you think the tourism industry should change to contribute to effective and sustainable development when the COVID-19 pandemic is controlled?

2. Employees’ questions
   - Have you encountered any challenges during the COVID-19 pandemic? If so, can you describe some of these critical challenges or barriers?
   - How has the government/business support you received in keeping your job during the pandemic? What support have you received from the government and your businesses? (iii) What was your job before the COVID-19 pandemic? Did you have any difficulty transitioning to a new job?
   - Do you desire to return to work in the tourism industry after the COVID-19 pandemic has been controlled?.

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