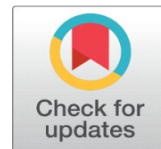


EXPLORING THE IMPACT OF COVID-19 ON TOURISM INDUSTRY OF BANGLADESH: AN EMPIRICAL STUDY



Sraboni Bagchi *¹  

¹ Lecturer, Department of Tourism and Hospitality Management, Pabna University of Science and Technology, Pabna, Bangladesh



ABSTRACT

The tourism industry is one of the fastest-growing service industries in Bangladesh. This industry observed consistent economic growth for the last five years and contributed significantly to the GDP of Bangladesh. The outbreak of the Covid-19 pandemic impacted the tourism industry notably. This paper aims to explore the impact on the tourism industry of Bangladesh, considering the economic and environmental aspects. The study found a catastrophic impact on the tourism industry's economic growth, which also affects the country's total GDP growth. The tourism industry is expected to contribute 1309.27 billion Taka, which would be 3.20% of the total GDP of Bangladesh, but the actual contribution is 539.60 billion Taka which is 1.70% of total GDP. The pandemic also negatively affected employment opportunities, tourists' arrival rate, hotel occupancy rate, and total tourism expenditures. On the other hand, despite some negative issues, Covid-19 impacted positively on the natural environment. The air quality improved, water pollution, noise pollution, consumption of natural resources, emission of greenhouse gas reduced notably. Considering the positive impacts on the environment, this study also formulated some possible recovery strategies to regain the economic losses through sustainable tourism development.

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Corresponding Author

Sraboni Bagchi,
sraboniu73@gmail.com

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1. INTRODUCTION

"Tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" [WTO. 1995](#). Tourism and travel are as old as civilization itself. Ancient humans have traveled from place to place from the beginning of time to see the unknown or explore new areas and places of interest [Ahmed, Feroz, and Md. Mizanur Rahman. 2001](#). Nowadays, the tourism industry is one of the world's most important industries, generating socio-economic growth and employment creation. It is crucial in promoting prosperity and empowering women, youth, and other members of society. The advantages of travel and tourism extend well beyond their direct effects on GDP and employment; they also include indirect benefits through supply chain links to other industries and induced impacts [WTTC. 2020](#). The tourism industry plays a significant role in world economic progress. In the year 2019, travel and tourism add 8.9 trillion dollars to the world economy, which is 10.3% of the global economy GDP. Overall economic growth was observed 2.5% in 2019, where travel and tourism growth were 3.5%.



Travel and tourism also continue to be a key driver of employment creation worldwide and a dynamic engine of work possibilities. It produced 330 million employments, with 1 out of every 10 professional positions in the tourist industry and 1 out of every 4 new jobs during the previous five years [WTTC. 2020](#). The contribution of travel and tourism to GDP in Asia-Pacific accounted for 34% of all worldwide travel and tourism GDP. With a 5.5% increase in Travel & Tourism GDP in 2019, Asia-Pacific was the fastest-growing region in 2019. The contribution of travel and tourism to employment in Asia Pacific accounted for 55% of all jobs in the industry globally. Over the previous five years, the area has been a global leader in employment creation. Travel and tourism produced 21.5 million new employments (or 56% of all new positions globally). This indicates that the industry produced one-third of all net new employment in Asia-Pacific [WTTC. 2020](#). Bangladesh observed the contribution of travel and tourism to GDP 2.7%, and to employment 1859.4 thousand jobs were created, which is 2.9% of the total employments in 2019 [WTTC. 2021](#). Bangladesh's tourism business is valued at over 500 million Bangladesh Taka (BDT), with a total income of USD 1157 billion from 2009 to 2019. On average, 550,000 tourists visit Bangladesh each year, resulting in the creation of 2.23 million employments [Hossain, Basharat, and Syed Naimul Wadood. 2020](#). This rhythmic development journey of the travel and tourism sector suddenly stumbled due to emergence of coronavirus (Covid-19) in the last of 2019. On the 31st of December, the World Health Organization was notified of instances of pneumonia with an unknown etiology in Wuhan, China. On January 7, 2020, Chinese officials discovered a new coronavirus as the source, which was given the temporary designation "2019-nCoV" [WHO. 2020](#). Globally, the WHO had received 186 232 998 confirmed cases of COVID-19 from national authorities as of July 11, 2021, including 4 027 858 fatalities [WHO. 2021](#). On March 8, 2020, Bangladesh reported the country's first confirmed coronavirus cases after three persons tested positive for the contagious virus in the capital Dhaka [Sakib, SM Najmus. 2020](#). There were 1 021 189 COVID-19 cases verified by RTPCR, GeneXpert, and Rapid Antigen testing between March 8, 2020, and July 11, 2021, with 16 419 fatalities. Bangladesh is one of the top 29 nations in the globe, accounting for 0.55 % of all COVID-19 cases [DGHS. 2021](#). To handle this dire situation Bangladesh government-imposed lockdown several times. Every sector including hotel, motel, restaurant, transportation, and airline industry remained closed during the lockdown period [Deb, Santus Kumar, and Shohel Md. Nafi. 2020](#). Hundreds of travel and tour businesses closed due to the ongoing coronavirus situation (Covid-19), and a significant number of hotels, restaurants, and resorts closed their doors [Hasan, Abir. 2020](#). Travel and tourism sector significantly affected by the Covid-19 which leads a significant impact on the economic situation of Bangladesh. In this study, we will discuss and try to find out the impact of Covid-19 on the tourism industry in Bangladesh and will provide some suggestions based on the findings.

2. LITERATURE REVIEW

COVID-19 has had a tremendous impact on the world's economic progress. Large-scale quarantines, travel bans, and social-distancing policies have resulted in a dramatic drop in consumer and company spending. A few governments used a lockdown method to regulate movement. Consumers stay at home, firms lose money and lay off people, and unemployment levels grow substantially as a result of this method. This predicament resulted from a global economic downturn. Covid-19 had

the greatest impact on the travel and tourism industry [Bakar, Nashirah Abu, and Sofian Rosbi. 2020.](#)

[Chowdhury, Dr. Emon Kalyan. 2020](#) conducted a study to investigate the devastating effects of Covid-19 on Bangladesh's thriving tourism industry. He discovered that the companies' post-event cumulative abnormal returns were notably negative, indicating their worst performance. Stock returns are negatively impacted by movement restrictions and lockdown days, whereas confirmed cases have a beneficial influence. As a natural-resource-rich country, he suggested that Bangladesh must build a suitable policy framework with good coordination across relevant agencies at both the government and commercial levels. Planned and managed infrastructural development plans, massive promotional activities with a special emphasis on domestic tourism, advancement of eco-tourism plans for naturally rich areas such as Chattogram and Sylhet, and a tourist-friendly atmosphere involving local people while ensuring security and safety will not only make tourism a significant profit-making source for the government, but it will also help the government to achieve its goals.

[Deb, Santus Kumar, and Shohel Md. Nafi. 2020](#) researched intending to look at the impact of the COVID-19 pandemic on Bangladesh's tourism business. They identified the COVID-19 pandemic had had a major impact on international travel and tourism. Outbound and inbound tourism have both suffered setbacks in Bangladesh. Domestic and international tourists have canceled their plans to visit Bangladesh, and outbound travel has been prohibited. Airlines have canceled flights, and hotels are nearly empty, causing massive economic losses and job layoffs in Bangladesh's tourism industry. They suggested that to combat the COVID-19 scenario, all public and private sector companies should work together. Furthermore, Bangladeshi policymakers should implement an all-encompassing package to assure the tourism industry's recovery and long-term viability following COVID-19.

[Horaira, Mohammad Abu. 2021](#) assessed the implications of COVID-19 on global tourism against the instability of COVID-19, notably in Bangladesh, and tried to look for ways out and regional restoration proposals. He suggested ten points as a strategic recovery proposal and also showed individual citizen activities, direct involvement of the country's public health specialists, and foreign support are also required, in addition to the strategic proposals.

[Islam, S. M. Nazrul, Md. Al-Amin, and Sk. Rahima Akter. 2021](#) pursued a study to determine the influence of COVID-19 on regional tourist development in Bangladesh, particularly in the Cumilla district. They revealed that COVID-19 and the present pandemic crisis seem to have had a significant detrimental influence on tourism development, particularly in Cumilla, Bangladesh. The frequent imposition of lockdowns has harmed the development of visitor attractions and their surrounding areas. In the absence of lockdown, people visited many tourist places. The majority of tourists are pleased with the tourist attractions and transportation and are dissatisfied with non-compliance with hygiene rules, expensive tour costs, insufficient security, and tourist administration systems. The majority of visitors recommended installing suitable thermal scanners and hand sanitizer at the tourist attraction's entry, lowering the cost of touring and engaging in more marketing campaigns.

[Jaipuria, Sanjita, Ratri Parida, and Pritee Ray. 2021](#) examined the impact of COVID-19 in terms of loss and gain in foreign exchange earnings (FEE) under multiple situations with and without lockdown. They explained COVID-19's increased prevalence has a significant impact on the tourism sector, which may

continue for a certain time. In March 2020, compared to the previous month, the number of international tourists arriving from all over the world decreased by 68%. It has a significant impact on FEE, which is a type of revenue earnings by tourism. Their findings indicate that unless the tourism industry and policies are reformed, the FEE will drop below USD 1790.53 million, maybe disappearing entirely. The FEE amount will be at least USD 13351.07 million if it is regulated at some level through revising policies.

[Foo, Lee Peng, Mui Yin Chin, Kim Leng Tan, and Kit Teng Phuah. 2020](#) analyzed the influence of COVID-19 on Malaysia's tourism sector and found that the epidemic is having a significant impact on Malaysia's tourism industry, specifically the airline and hotel industries, as travelers from all over the world are postponing their reservations and prolonging their trips to Malaysia due to the virus and the travel bans and restrictions imposed by the Malaysian government. They hoped the economic stimulus program is expected to help the tourism sector stay afloat during this difficult time.

[Abbas, Jaffar, Riaqa Mubeen, Paul Terhemba Iorember, Saqlain Raza, and Gulnara Mamirkulova. 2021](#) showed that the leisure and domestic tourism sectors had a severe decrease of 2.86 trillion US dollars, representing a revenue loss of more than 50%. The study begins with an examination of the COVID-19 pandemic's repercussions and contexts, as well as how innovation and change might aid the tourism industry's transition to the new normal. As a result, the study concludes that, in order to rebuild and establish the tourist sector, tourism companies and researchers must analyze and reform the basic principles, main assumptions, and organizational problems connected to the research and practice framework.

[Baum, Tom, and Nguyen Thi Thanh Hai. 2020](#) undertook a study to conduct a "real-time" evaluation of the impact of the COVID-19 pandemic on the right to engage in hospitality and tourism and identify areas in which such rights are threatened. They found that the COVID-19 outbreak puts people's rights as visitors under threat. The worldwide hospitality, travel, and tourist industry faces a bleak future across all of its operational sectors, with many firms unlikely to recover in their previous form, if at all. According to some estimates, up to 75% of small hotel companies in Europe and the United States may not reopen during the epidemic.

[Collins-kreiner, Noga, and Yael Ram. 2020](#) researched various approaches to repairing the tourism sector by analyzing several national tourist strategies. They stated that with the fall of Covid-19 in certain areas, tourism started to pick up again, and hotels, tourist sites, restaurants, and transport began to reopen. However, in certain areas, a second phase has prompted the tourist industry to drop once more. This study was a beginning attempt to examine national policies since they provide an evidence-based picture of a limited group of nations six months after the outbreak began. They anticipated a transition from the "top-down" strategies proposed by key bodies and organizations to a "bottom-up" strategy by analyzing the pandemic's influence not only on the tourist sector but also on policy development on a worldwide level.

[Haywood, K. Michael. 2020](#) found in his research that the contemporary demands need an examination – a re-envisioning and re-exploration of tourism's future – of what needs to change or remain constant. Despite COVID-19's devastating consequences, new types of solidarity are arising that challenge the dominant competition ethic. While a global economic resurgence must remain a key goal, progress will be made as the tourism industry becomes more transformative and transcendent. He added new approaches for attaining the Sustainability

Objectives and variants of a Green New Deal, for example, are gaining interest, particularly the introduction of 'large scale flourishing' in anti-fragile ways.

Higgins-Desbiolles, Freya. 2020 unveiled that the worldwide crisis, which has resulted in the closure of travel, tourism, hospitality, and festivities in many areas of the world, gives a chance to explore the opportunities at this historic, revolutionary time. The manner in which tourism has promoted neoliberal inequities and exploitation is briefly shown in a critical tourism study of these events. The COVID-19 pandemic issue may provide a once-in-a-lifetime chance to reconsider and reset tourism on a more sustainable track in the future. However, 'responsible' tourist techniques alone will not be adequate to achieve such a reset. Instead, such a vision necessitates the development of community-centered structural flexibility that reshapes and reconfigures tourism around the rights and obligations of local citizens.

Jones, Peter, and Daphne Comfort. 2020 examined some of the connections between sustainable development and tourism Through the perspective of the COVID-19 problem. He gave an overview of the COVID-19 problem and looked at some of the connections between sustainable development and tourism. He suggested that the crisis has been revealed. that the COVID-19 disaster not only posed a slew of significant issues for the tourism industry but also signaled some changes in the environment that may be pivotal to the transition to a more sustainable society, emphasized some of the internal flaws and complexities inside the principle of sustainable development, and proposed some radical solutions to the problem.

Riadil, Ikrar Genidal. 2020 expressed that the COVID-19 pandemic impacts people all around the world, including Indonesia, where the tourist industry is one of those affected. Indonesia is now aware of this viral infection, which affects the firm, someone's employment career, and has an influence on the tourist and hospitality sectors, particularly when the pandemic sickness worsens. The purpose of their study was to look at the viewpoints of Indonesian tourist employees who work in the tourism and hospitality industries to examine how their professions affect their careers. Their research revealed that each sector has its own viewpoint on their problem and how to handle their business and workforce, as well as, probably, their judgment on how effectively the industry keeps the industry functioning and the employees. The result showed the role of the Indonesian government in assisting employees in the tourist and hospitality industries is good.

Gössling, Stefan, Daniel Scott, and C. Michael Hall. 2020 compared the effects of COVID-19 to prior pandemics and other forms of global crises and investigated how the outbreak may affect the economy, society, and tourism. They found ongoing good improvements may be viewed as antecedents for larger transformation, leading to a reorientation of the global tourism sector toward the SDGs instead of "growth" as an abstract concept benefiting the few. Their conclusions about the need for economic transformation might be compared with business aspirations to return to "normal" and perhaps overcompensate for lost income. It is also to be predicted that in the event of a worldwide recession (perhaps depression), austerity will lead to calls to abandon existing efforts to implement even moderate carbon pricing.

Kaushal, Vikrant, and Sidharth Srivastava. 2021 addressed two critical issues: the first is about the key problems that the hospitality and tourist sector is facing in the present environment, and the second is about the critical learnings for the sector. The qualitative investigation covered the need for staff multiskilling and career development, improved awareness of hygiene, sanitation, and associated

SOPs, hope for the industry's recovery, media involvement, and a need for greater crisis preparedness based on the four main topics; Human Resource Management, Continuity, Health and Hygiene, and Concerns. The analysis found a rise in publications relevant to the previous SARS pandemic in the afterward, which progressively decreased. A spike in theoretical contributions is also expected during this time period, and the study contributes to the existing body of literature on epidemic crises in the context of tourism and hospitality. The study also offered the perspectives of individuals who are responsible for preparing people and hiring them once they have completed their skills training and essential education for the tourist and hospitality industries.

Rahman, Md. Saidur, Md. Azharul Alam, Serajis Salekin, Md. Ariful Hoque Belal, and Md. Saifur Rahman. 2021 used information from newspapers, remote sensing, social media, and organizational data to analyze the impact of the national lockdown on forest and animal conservation and the people who rely on forests in Bangladesh. The countrywide lockdown exacerbated the forest-dependent populations' non-forest revenue activities, putting further strain on neighboring woods. They showed increased deforestation warnings in May 2020, and about 222 hectares of forest land were destroyed from January to October 2020, which is 8% greater than the entire year of 2019. They emphasized policy implications that might be beneficial in decreasing pandemic-caused risks and maintaining and promoting conservation initiatives in various forests in Bangladesh.

The current literature review helps to provide in-depth insights regarding the impact of Covid-19 on the tourism industry. Most of the literature showed the impact of the pandemic on the tourism industry, concentrating on the economic contribution to the GDP of different countries. Environmental factors of the tourism industry did not get attention while considering the impact of the pandemic. In this study, we will try to find out the impact of Covid-19 on the tourism industry in Bangladesh, considering the environmental and economic factors in a more constructive way using the up-to-date information.

3. OBJECTIVES OF THE STUDY

The tourist industry is a nexus of many other economic sectors, including hotels, community-level activities, education, financial services, agriculture, medical services, travel and transport, infrastructure, land, and retailers Horaira, Mohammad Abu. 2021. Natural catastrophes, disease pandemics, terrorism, uprisings, and other events make the tourism sector highly vulnerable Yeh, Shih Shuo. 2021. The main aim of this study is to;

- 1) Identify the impact of Covid-19 on the contribution of the tourism industry in the economy of Bangladesh.
- 2) Reveal the impact of the Covid-19 pandemic on the environment of tourism destinations.
- 3) Provide some possible recovery strategies for the tourism sector development of Bangladesh.

4. ABOUT CORONAVIRUS DISEASE (COVID-19)

Coronavirus is a kind of virus that may cause illnesses including the common cold, severe acute respiratory syndrome (SARS), and Middle East respiratory

syndrome (MERS). In 2019, a novel coronavirus was discovered to be the source of a sickness epidemic in China. The virus is now recognized as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Coronavirus illness 2019 is the name of the sickness it causes (Covid-19). The World Health Organization (WHO) termed the Covid-19 outbreak a pandemic in March 2020. Bangladesh confirmed the first Covid-19 positive case on March 8, 2020. Covid-19 is caused by a virus that spreads quickly among individuals, and new information about how it spreads is being found all the time. According to data, it is primarily transmitted from person to person among those in close proximity (within about 6 feet). The respiratory released by virus-infected people through cough, sneezes, breathes, sings or talks can be inhaled by someone or can land in someone's mouth, nose, or eyes that may cause infection [MayoClinic. 2020](#), [WHO. 2020](#). WHO provided some guidelines and issued some safety and hygiene rules against coronavirus? Proper practices of the rules reduce the risk of infection. In spite of developing and maintaining significant measures to prevent coronavirus, the infection rate is on the rise. The list of people who caused death and were affected by coronavirus is getting longer. The following table summarizes the number of confirmed cases and deaths for the last six months:

Table 1 Number of Confirmed Cases and Deaths for the Last Six Months (Cumulative total at the end of the month)

Month	Bangladesh		World	
	Confirmed Case	Death	Confirmed Case	Death
January, 2021	535139	811	103382508	2356715
February; 2021	546216	8400	114472054	2660290
March, 2021	617764	9046	129171051	2947777
April, 2021	756955	11305	151656992	3321418
May, 2021	800540	12583	171404936	3714385
June, 2021	896770	14503	182893112	3978715

Source: WHO and Worldometers

5. COVID-19 & TOURISM INDUSTRY IN BANGLADESH

Bangladesh is rich in natural, cultural, religious, archeological, and man-made tourism attractions. It has the potential to attract a large number of domestic and international tourists [Hafsa, Shelamony. 2020](#). There are archaeological sites in the northern part of the Rajshahi division, including the temple city Puthia in Rajshahi; Mahasthangarh in Bogra, the largest and most historic archaeological site; Paharpur in Naogaon, the largest single Buddhist monastery; Kantaji Temple, the most intricately carved terracotta Hindu temple; and several rajbaris or palaces of ancient zamindars. Natural and mountainous landscapes like the Chittagong Hill Tracts, as well as sandy sea beaches, may be found in the south-eastern section of the country, which is known as the Chattogram Division. Cox's Bazar's most famous beach is a frontrunner for the title of the world's longest undivided sandy sea beach. The Sundarbans, the world's biggest mangrove forest, is located in the southwestern

portion of the country, mostly in the Khulna Division, and is home to the royal Bengal tiger and spotted deer. Bagerhat's sixty-domed mosque is a historically and architecturally significant structure. On tiny hilltops in the north-eastern portion, Sylhet division, there is green carpeting of tea plants. Forests that have been designated as natural reserves are fantastic attractions. In the winter, migratory birds, particularly in the haor regions, are also extremely appealing in this area [BPC. 2021](#), [WIKIPEDIA. 2016](#). Tourism has various advantages for a country or community that hosts it, but it all relies on its nature and how it will be defined and organized. Tourism contributes substantially to a country's overall growth and development by providing various economic advantages as well as aiding in the establishment of a country's brand reputation, image, and identity [Horaira, Mohammad Abu. 2021](#). In 2019, travel and tourism contributed 2.7% to Bangladesh's GDP, and 1859.4 thousand jobs were generated, representing 2.9 percent of total employment [WTTC. 2021](#). From 2009 to 2019, Bangladesh's tourist industry was worth about 500 million Bangladesh Taka (BDT), with total revenue of USD 1157 billion. Each year, 550,000 visitors visit Bangladesh, resulting in the employment of 2.23 million people. [Hossain, Basharat, and Syed Naimul Wadood. 2020](#). The COVID-19's worldwide disruption has shown a number of consequences for the environment and ecosystem. Air quality has improved in many cities, and water pollution has decreased in many regions of the world, as a result of mobility restrictions and a major slowdown in social and economic activity. Furthermore, increased usage of personal protective equipment (PPE) (e.g., face masks, masks, hand gloves, etc.), their haphazard disposal, and the creation of a large volume of hospital trash have severe environmental consequences [Rume, Tanjena, and S. M. Dida. Ul Islam. 2020](#).

6. METHODOLOGY

The research is based on secondary data. Compared to primary papers, secondary documents are less costly and easier to access. Published journals, books, conference papers, newspaper articles, seminar papers, related websites are used and assessed to collect the relevant information. Both qualitative and quantitative research approaches are used to carry out this work. Quantitative data are processed using Statistical Package for the Social Sciences (SPSS) and Microsoft Excel software. This research is exploratory in nature. Information is collected up to July 15, 2021.

7. ANALYSIS AND INTERPRETATION

- 1) Impact of Covid-19 on Tourism Industry's Contribution to the Economy of Bangladesh.

The tourism sector is linked to other businesses such as transportation, aviation, hotels, motels, resorts, travel agencies, and so on, either directly or indirectly. Covid-19 pandemic impacted all these related sectors significantly. Here we will summarize the impact of the pandemic in different sectors related to the tourism industry of Bangladesh.

Table 2 Travel and Tourism Expenditures (USD in Billion)

Year	2015	2016	2017	2018	2019	2020A	2020F
Business Tourism Spending	0.93	0.83	1.12	1.23	1.03	0.68	1.03
Leisure Tourism Spending	6.97	7.26	7.61	8.53	7.37	4.78	7.55
Domestic Spending	7.76	7.91	8.43	9.43	8.04	5.31	8.20
International Spending	0.14	0.19	0.31	0.32	0.36	0.14	0.43
Total	15.8	16.19	17.47	19.51	16.8	10.91	17.21
Growth Rate	4.91	2.47	7.91	11.68	-13.89	-35.06	2.44

Source: WTTC

(Growth rate & 2020F is calculated using SPSS)

The above table is summarizing the travel and tourism expenditure of 5 years ranging from 2015-2020. Estimated expenditures for the year 2020 are forecasted based on the previous data from 2015-2019 shown in column 2020F. Business Tourism Spending, Leisure Tourism Spending, and Domestic Spending observed increasing rates up to 2018 and decreased in 2019 and 2020. The international spending sector followed an increasing rate from 2015 to 2020. Huge differences are noticed between the estimated value and actual value of expenses for the year 2020. According to WTTC, total spending in the year 2014 was 15.06 billion US dollars; in 2015, it was 15.80 billion US dollars with a growth rate of 4.91%. From 2015 to 2018, total expenditures observed a positive growth rate, and in 2019 and 2020, it observed a significant negative growth rate. Considering the declining rate of 2019 total value of expenses for the year 2020 was estimated 17.21 billion US dollar with 2.44% growth rate whereas actual expenses were 10.91 billion US dollar with negative 35.06% growth rate.

Table 3 Contribution of Travel and Tourism to Employment (Jobs in thousands)

Year	2015	2016	2017	2018	2019	2020A	2020F
Total Contribution	1106.38	1068.85	1296.23	1480.49	1859.40	1452.30	1932.52
% Of Total Employment	1.87	1.79	2.08	2.70	2.90	2.30	3.14
Growth Rate (%)	-2.02	-3.39	21.27	14.22	25.59	-21.89	3.93

Source: WTTC

(Growth rate & 2020F is calculated using SPSS)

The above figure provides a clear view regarding the contribution of travel and tourism to the employment of Bangladesh. According to WTTC data, the travel and tourism sector created 1129.19 thousand employment opportunities during 2014. In 2015 and 2016, the employment rate declined by 2.02% and 3.39% respectively and in the 2017, 2018, 2019 the employment rate increased significantly, which possessed 2.08%, 2.70%, and 2.90% share of total employment, respectively. In the year 2020, the expected share of employment was 3.14% at a 3.19% growth rate, but the actual share was 2.30% at a negative 21.89% growth rate.

Table 4 Total Contribution of Tourism Industry to the GDP (Billion TK)

Year	2015	2016	2017	2018	2019	2020A
Contribution to GDP	800.16	819.00	886.41	987.09	1134.00	539.60
% Of Total GDP	2.21	2.11	2.13	2.20	2.70	1.70
Growth Rate (%)	5.52	2.35	8.23	11.36	14.88	-52.42

Source: WTTC

(Growth rate & 2020F is calculated using SPSS)

From the year 2015 to 2019 travel and tourism sector contributed notably to the GDP of Bangladesh with a positive growth rate. The expected contribution to GDP in the year 2020 was 1309.27 billion Taka which was 3.20% of total GDP at a 15.46% growth rate, but the actual contribution was 539.60 billion Taka which was 1.70% percent of total GDP at a negative 52.42% growth rate.

Table 5 Scenario of Tourists Arrival (Persons)

Year	2015	2016	2017	2018	2019	2020A	2020F
Tourists	126000	182000	237000	267000	323000	168201	369977
Growth Rate (%)	-5.97	44.44	30.22	12.66	20.97	-47.93	14.54

Source: World Bank Data & CEICDATA

(2020F is calculated using SPSS)

Table 5 reveals that from 2016 to 2019, Bangladesh observed a positive growth rate of tourist arrival. According to World Bank data, in 2014, the number of tourists' arrival was 134000, which decreased to 126000 in the year 2015 with a 5.97% negative growth rate. In 2020, the estimated number of tourists was 369977 with a positive 14.54% growth rate, but the actual number of tourists was 168201 persons that yields negative 47.93% growth rate.

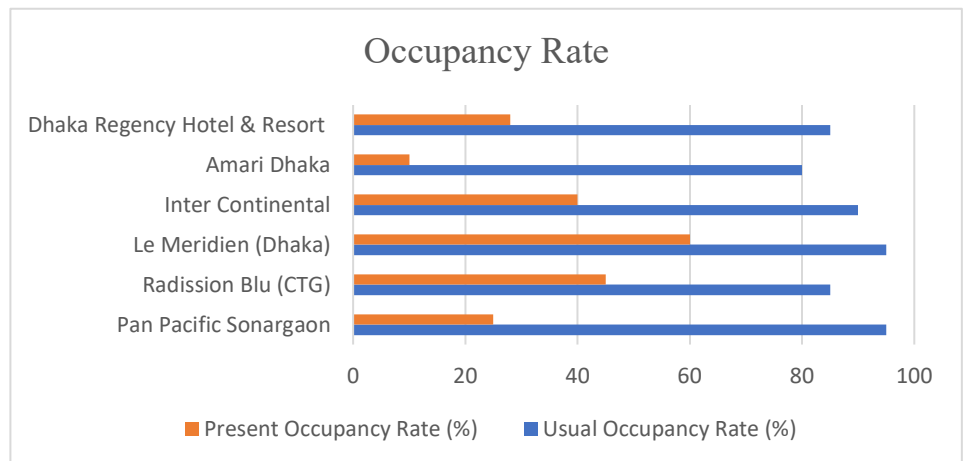


Figure 1 Luxury Hotel Occupancy Rate

Source: The Daily Star (2020)

The coronavirus pandemic has had a cascade impact, affecting nearly every industry. The epidemic has shown a significant impact on the hotel industry. The pandemic urges the imposition of frequent lockdown and travel restrictions worldwide, leading to the cancellation of several events and flights in Bangladesh. According to the report, hotels that used to have 80-90% occupancy rates are now seeing occupancy rates of less than 30%. The hotel industry's precarious condition may worsen as both national and international flight frequency has decreased considerably. According to a Global Business Travel Association survey, the global travel industry is anticipated to lose \$820 billion in sales. Bangladesh International Hotel Association estimated that the sector lost nearly TK 7,000 crore during 2020 as the number of guests reached an all-time low

2) Impact of Covid-19 Pandemic on the Environment of Tourism Destination.

The COVID-19 has had a number of environmental and climate-related consequences as a result of its worldwide disruption. Air quality has improved in many places, with water pollution reduced in many regions of the world due to movement restrictions and a major halt of social and economic activity [Rume, Tanjena, and S. M. Dida. Ul Islam. 2020](#). Other environmental benefits include governance-system-controlled investments in a sustainable energy transition and other environmental goals, such as seven-year €1 trillion proposed budget and €750 billion recovery program "Next Generation EU," by the European Union, which aims to set aside 25% of EU spending for weather-friendly outlays [Carpenter, Scott. 2020](#). Based on the current literature, the following ([Figure 2](#)) summarizes the positive and negative impact of Covid-19 on the environment:

Impact of Covid-19 on Environment

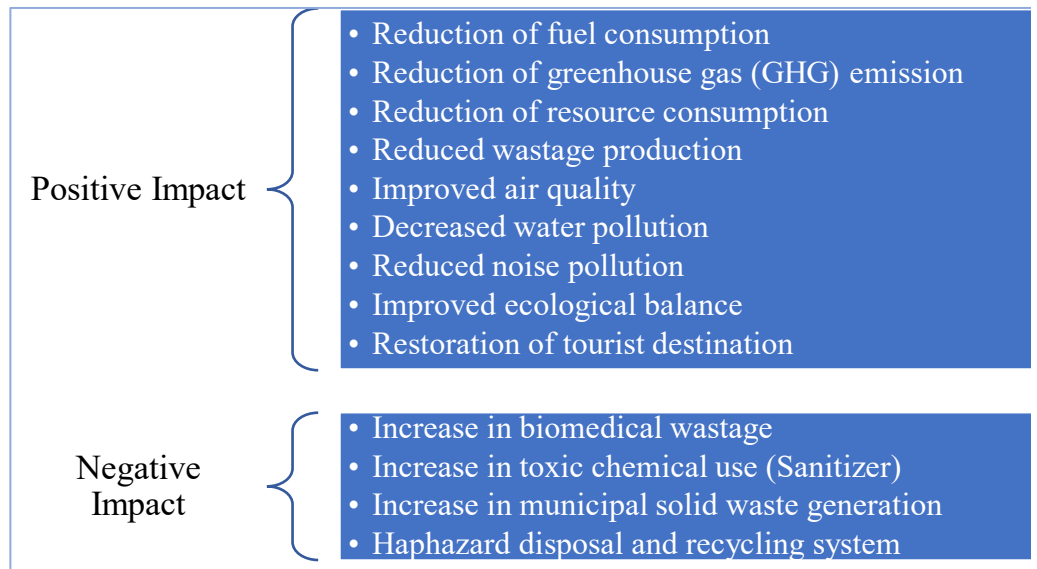


Figure 2 Positive and negative impact of Covid-19 on environment

In Bangladesh, the entry ban has been imposed on all tourist centers since March 16, 2020. This prohibition also includes the longest beach in the world- Cox's Bazar. The noisy beach seems to have survived today. In this silent situation,

Sagarlata (*Ipomea pes-caprae*/ Railroad), a creeping and fast-growing plant, has become intoxicated with making green carpets. Eminent environmentalist Ragibuddin Ahmed said, 'Sagarlata is very important for the survival of other animals on the beach such as crabs and birds. Its green leaves protect the soil from the sun's rays in such a way that the heat of the sun does not evaporate excess water from the soil. This enables them to create an ideal environment for other animals, including beneficial bacteria in the subsoil. A group of tortoises has found roaming the vast sandy beach of the sea without any hindrance and also laid eggs on the beach. Listed as an endangered species, the sea turtle plays an important role in maintaining the balance of the marine environment, especially in maintaining the food chain. In addition, they help to keep the water clean by eating the dirt and garbage of the sea. [Ahmed, Tanvir. 2020](#) reported that after many years, the team of dolphins came very close to the locality and competed in somersaults. Not only Cox's Bazar but also Kuakata, the famous tourist city of Sagarkanya, is also busy unveiling its beauty. The red crabs are observed busy in free and fearless movement on the beach after a long time. All the tourism destination has reshaped with its own natural beauty during this Covid-19 pandemic period. [Mawa, Jannatul. 2020](#) in her report, stated that besides restoration of natural beauty, the air quality of Bangladesh has also improved. On March 31, 2020, Air Visual, the US-based air quality assessing organization, reported that Air Quality Index (AQI) of Dhaka fell to the 23rd number.

8. FINDINGS AND IMPLICATIONS

The analysis discloses that Covid-19 impacted the tourism industry of Bangladesh significantly. The tourism industry contributes a standard amount of money to the economy of Bangladesh. From 2015 to 2019, the industry contributed more than 2% to the GDP of Bangladesh, and in 2020, the contribution would be 3.20% of total GDP if the pandemic didn't take place. The economy of Bangladesh observed less travel and tourism expenditures of 6.3 US billion-dollar during 2020 compared to the year 2019 because of the Covid-19 pandemic as it requires the imposition of frequent lockdown, travel ban, movement restriction, the shutdown of business and economic activities for a long time. Employment is directly related to economic development. According to Okun's law, which economist Arthur Okun proposed in 1962 if GDP expands fast, unemployment falls, if growth is very low or negative, unemployment rises, and if growth matches potential, unemployment remains constant. [Higgins, Patrick. 2011](#). During the pandemic period, 407.1 thousand people lost their job that impacted the economy badly, whereas it was forecasted that the tourism industry will create more employment opportunities in the year 2020 and will occupy a 3.14% share of total employment. The number of tourist arrival notably decreased because of airline cancelation and travel restrictions. Hotel businesses faced an estimated 7000 crore loss as hotel occupancy rate decreases to below 30%, whereas the international hotels observe 80-90% occupancy rate in normal time.

Among all the negativities natural environment observed the positive consequences of the Covid-19 pandemic. The pandemic reduced fuel consumption, wastage production, air pollution, water pollution, sound pollution, and improved air quality. Greenhouse gas emissions were also reduced as the production industry suspended its activities several times during the lockdown period. Natural animals are found moving freely and fearlessly at their own ground. The Covid-19 is blessings to the natural environment as it helped nature to restore/ regain its beauty.

This study is significant for the policymaker, tourism service provider, and related stakeholders. This will provide insight to them regarding the impact of the Covid-19 pandemic on the tourism industry of Bangladesh. While designing possible recovery strategies to expedite the tourism sector development, concerned authorities may consider the suggestions stated in this paper.

9. POSSIBLE RECOVERY STRATEGY

The COVID-19 pandemic still has a social, psychological, socio-economic, and cultural impact on many tourist stakeholders, and they will continue to experience the negative consequences for a longer period of time [Abbas, Jaffar, Riaqa Mubeen, Paul Terhemba Iorember, Saqlain Raza, and Gulnara Mamirkulova. 2021](#). This study considered the economic and environmental situation of the tourism industry during the pandemic. The study found that Covid-19 declined the potential rapid economic growth and improved some environmental issues in the tourism industry of Bangladesh. Proper planning and recovery strategy may ensure sustainable tourism development, which will drive the economic growth of the tourism industry, upholding the positive environmental issues. Here are some possible recovery strategies. Concerned authorities may consider the strategies to make their recovery plans more effective and fruitful.

- 1) Ensure the availability of intelligent medical devices to trace corona virus-infected people and disinfectant spray to the entry gate of a tourism spot.
- 2) Prepare some measures to remove the fear of the coronavirus and attract tourists to visit tourism destinations maintaining the hygiene and safety rules.
- 3) Rethinking, re-imagination and reshaping of some tourism ideas and destinations may contribute positively after the pandemic tourism situation.
- 4) Service providers and related stakeholders must be aware of and maintain the safety and hygiene rules and will encourage tourists to maintain the rules.
- 5) Inform people regarding the positive scientific impact of tourism on human health, mind, and psychology.
- 6) Emergency medical facilities must be improved. Tourists should not feel alone if they face any health problems.
- 7) Attracting domestic people more may positively contribute to the tourism economy. Some affordable tour packages, providing proper guidelines, and ensuring security and safety may be beneficial in this concern.
- 8) International tourists significantly contribute to the tourism industry. Advertisement regarding tourism spots and branding country may be a handy tool to attract international tourists.
- 9) The government may consider providing cash incentives and slashing the VAT and supplementary duties to support the hospitality sector.
- 10) Increased Public-private partnership (PPP) investment may open a new development window for the tourism sector.
- 11) The introduction of green transportation systems, increasing the use of renewable energy, waste recycling and reuse, and reducing water, air, and noise pollution may ensure sustainable tourism in Bangladesh.

12) World Tourism Organization (UNWTO), World Travel and Tourism Council (WTTC), and World Health Organization's (WHO) guidelines should be considered while designing any plan regarding tourism sector development.

10. CONCLUSION

Covid-19 impacted notably both positively and negatively the tourism sector of Bangladesh. The potential economic growth of the tourism sector stumbled because of the corona pandemic, whereas the natural environment of tourism destinations restored its own beauty. The consequences of the pandemic will not end so quickly. So, possible planning and strategies should be formed considering this situation as new normal that will help regain economic progress considering the positive impact on the natural environment. Appropriate planning and possible recovery strategy will smoothen the tourism sector's development and make Bangladesh one of the most attractive tourist destinations globally.

This study is based on publicly available secondary data. It will help researchers to enriches the knowledge related to covid-19 impact and tourism sector development. Further study may be conducted based on the primary data using quantitative analysis techniques to a greater extent.

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