

How covid-19 has affected supply and demand within tourism industry?

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ABSTRACT

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There is no doubt that coronavirus has succeeded in crippling businesses and people worldwide. It has led to unprecedented economic crisis in countries around the world. The tourism sector isn't an exception to its devastating impacts. The virus has succeeded in affecting not just the economy. In addition to such, job opportunities, and regional developments in local communities have been greatly affected. Tourism throughout the world has been stagnant since the month of April 2020 due to the advent of COVID-19. Given this temporary problem, economies and employment rates have been affected to a great extent. Also, local communities around the world are struggling to survive. In most countries, 50% the revenue generated from exports is contributed by tourism. This means it is a major contributor of GDP (Gross Domestic Product) as well as employment. The major aim of this paper is to carry out an objective review that can enable researchers and experts understand as well as manage the impacts of COVID-19 on tourism. For this to be achieved, this paper discussed the transformational opportunities presented by COVID-19 including questions that it raises. The paper attempts to identify pre-assumptions, institutions, and fundamental values which the tourism industry including other academia need to challenge for development to be achieved. Furthermore, the paper discusses the major impacts, experiences and behaviors being experienced by the 3 stakeholders in the tourism industry – social cost, supply, and demand. Just as measures have been adopted by countries to ameliorate the situation, recommendations have been put forward to ensure speedy recovery of the sector.

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1. Introduction

Traveling is one of the most entertaining activities. It gives people the rare chance of meeting new faces and discovering new practices. However, this is only possible when such route is free of catastrophes, illnesses and crimes. The good part is that these risks can be dealt with or managed in the most effective manner. The major nightmares that every traveler fears are pandemics and epidemics. In cases like these, avoiding the disease is almost impossible. Apart from the travelers, the lives of people they will encounter during such journey are also at great risk. When it comes to transfer of pandemics and epidemics between locations, passengers tend to play a very serious role (Hollingsworth et al., 2006). As a result of coronavirus, the world seems to be more focused on dealing with epidemics.

Through the emergence of more coronaviruses, new pandemics and epidemics are being triggered. The pathogens seem to be mutating very fast. Due to this, new strains are expected to suddenly emerge from any location. The origin of coronavirus is animals. This will then be transmitted to humans. In 2002, the popular

SARS (severe acute respiratory syndrome) virus was transmitted to humans from birds. Camels were the source of MERS which was also known as Middle East Respiratory Syndrome (Al-Tawfiq et al., 2014).


The SARS which infected people in 2003 originated from Asia. Also, it was the first epidemic to affect lives in the world of internet and globalization. Within a period of 8 months (November 2002-June 2003), it succeeded in getting about 8000 people infected. Around two-third of this population were people living in China, one-fifth were people living in Hong Kong according to Mackey and Liang (2012). Other locations where people became very ill were Canada, Singapore, and Taiwan. Deaths were also recorded in these countries. It is important to note that SARS had very minimal effect on productivity and economies around the world. This is because the number of people infected was low. It had some noticeable effects though. To avoid getting infected, tourists had to stay away from the region of Southeast Asia for some time.


Wuhan was the first place where people got infected from an unknown lung disease in 2019 (December). This was

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discovered in a market that allowed the trading of live animals. Another strain of coronavirus was discovered in patients who were suffering from pneumonia. Given the way it has been spreading globally, there is every reason to believe that the entire world has been held to a standstill (Backer et al., 2020; WHO, 2020a). This virus is now referred to as COVID-19. COVID is an acronym for Corona Virus Disease. Its epicenter remains Wuhan (Hubei Province). Trains and flights that are traveling from major cities into the locations have been put on hold. The roads remain closed, and people are expected to put on their facemasks while walking on the streets (WHO, 2020a). While all these were happening in China, the virus had spread into some parts of Europe. The media were reporting increase in numbers of infected persons and deaths. Due to the situation on ground, WHO (2020b) had to announce that the world had been hit by another pandemic on the month of January 2020.

The numbers of infections worldwide were 10,000 as of January (ending). Over 95% of these people were in China. around three-quarters of these infected people were in Hubei province. As the days were going by, the number of infections increased. For instance, it got to 3,000/day. Other countries also experience an increase in their numbers of infection. As explained by WHO (2020a), COVID-19 had spread to more than 100 countries. Within a period of 60 days, deaths recorded were about 4,300. On the 11th of march, WHO (2020b) referred to COVID-19 as a “pandemic”.

Apart from humans being affected, economies are greatly crippled by these infections to a great extent. For instance, people who are sick won't be present at work. When deaths are recorded, production activities will be further affected. There are also some indirect effects. A typical example is when parents not being able to work because of schools where children are taken care of being closed. When exit and entries are restricted, economic activities are affected. Another example of an indirect effect is when travelers begin to avoid affected regions due to fear of getting infected with such virus (McKibbin & Fernando, 2020). It is obvious that coronavirus has affected global travel traffic. Countries are closing their borders in a bid to prevent foreigners from entering their lands.

Travel and tourism activities contribute to the world's Gross Domestic Product (GDP) by creating jobs and income. In 2019, tourism activities created 330 million jobs and 8.9 trillion US dollars global GDP. However, 2020 has been the crisis year for the tourism industry and still is faces with strong challenges due to Covid-19 pandemic. Approximately 197 million jobs and 5.5 trillion US dollars have been lost in tourism as of 2020 (WTTC, 2020). Global unemployment has risen and labor income has experienced a sharp decline (ILO, 2021). Moreover, global GDP has declined during 2020 and it's expected that it will return its pre-pandemic level at the

end of 2021 (OECD, 2020a). World real GDP growth has been -4.2% in 2020 and all economic indicators underline that humankind has been experiencing a brand-new global economic crisis. What is more is that the main actors of this new crisis have been trade and tourism activities (OECD, 2020a pp.13). International tourist arrivals fell by 72% between January – October 2020 compared to the same period of the previous year (Brouder, 2020). This decline in first ten months of 2020 exhibited 935 billion US\$ in global export revenues. The most critical explanation of this indicator is that this decline corresponds more than 10 times loss experienced in 2009 after the global financial crisis. This expresses the importance of tourism industry in global economy during COVID-19. However, COVID-19 has a specific importance for tourism industry, too. World Tourism Organization indicates that the downturn in international tourist arrivals makes an important point to the emerging situation in tourism industry. Current decline in tourist arrivals indicates that international tourism has returned to its level in 30 years ago and this is quite critical for the future of travel and tourism activities. (UNWTO, 2020a, 1-3).

There are some important researches conducted to analyze the impacts of COVID-19 on tourism industry. Baba et al. (2020) applied a survey in Romania and the results of the survey indicated that tourists' attitudes and purchasing behaviors express differences for pre-pandemic and post-pandemic periods. As another study, Williams (2020) conducted an empirical analysis for 28 European countries and the results expressed that declared (registered) tourism businesses and workers have been better off during pandemic since they were able to get governmental financial supports. This result is remarkable since it underlines the negative impacts of unregistered economy on the European tourism industry during COVID-19. As another important research, UNWTO (2020b) indicates that international tourist arrivals fell significantly in 2020. This study develops three different scenarios for 2021-2024 period and all of them shows that international tourism recovery will be slow. This report also underlines those countries should implement true policy mix in order to restart the tourism industry. Yeh (2021) uses a qualitative research method to analyze the impact of COVID-19 on the tourism industry. In-depth interviews are conducted for getting opinions of the experts in tourism industry for Taiwan. According to the results of the analysis, most of the tourism-related businesses are badly affected from COVID-19 by facing stagnation, implementation of unpaid vacation and the downsizing of their business. Yang et al. (2020) proposed a Dynamic Stochastic General Equilibrium (DSGE) model for examining the impact of the coronavirus outbreak on tourism. In this study, impulse responses after a health disaster risk shocks are presented. The result of the analysis reveals that the risk of the health disasters makes the tourism sector and the economy in a very bad

situation. Santos and Moreira (2021) conducted a case study in which Portugal is selected for the tourist destination. The effect of the pandemic on the travel and tourism sector is analyzed through domestic international tourism arrivals and revenues, accommodation establishments, overnight stays and export of goods and services. The findings present that there is a sharp decrease in all tourism activities. For example, nearly half of the hotels were closed in December 2020.

The findings of some studies and the recent developments indicate that the tourism recovery will be on the forefront of the global actions in post-COVID era and hence new discussions have been emerging. WTTC (2020) underlines those four main trends will be in turn in post-COVID era as follows: health & hygiene, demand evolution, innovation & digitization, and sustainability. Consequently, tourism industry will experience strong transformations in new era. In this sense, the main aims of this study are twofold. The first one is analyzing the new facets of tourism activities during and beyond COVID-19. And the second one is developing a comprehensive discussion of the policy implications for the future of tourism in post-COVID era. In this context, this study is expected to contribute to the related literature by developing a policy discussion with the lens of sustainability in tourism industry.

For Parady et al. (2020), in the context of Japan, to measure the impact of variables that influence behavioral changes in reaction to the COVID-19 pandemic. To accomplish so, we use data from an original panel survey of Kanto inhabitants, namely the Tokyo Metropolis and the prefectures of Chiba, Saitama, and Kanagawa, as well as the prefectures of Ibaraki, Gunma, and Utsunomiya. The frequent decreases in activities like dining out and leisure time remained, as evidenced by the proportions of "no change (from zero)" and "drop" in the bottom figure. Developments in the supply side have also contributed to these changes. In contrast to other businesses, numerous restaurants and recreational venues shuttered or curtailed their business hours in response to the government's non-binding request. In contrast to most shopping centers, which supplied more vital services, many eating-out and recreation enterprises shuttered or limited their business hours in response to the government's non-binding request.

The COVID-19 tourist employment implications have increased the need of tourism education. It has had a significant impact on employment creation opportunities throughout the world. Students in the tourist industry must cope with training interruptions, recruiting, and insecure employment chances because of virtual learning and teaching. Reduced new student enrolment, marketing and government backing, and research funding are all challenges for tourism programs, initiatives, and academic universities. To evaluate organizational distance, tourism academics should investigate novel methodologies and

research possibilities, considering the mental health and privacy concerns of stakeholders affected by COVID-19. Similarly, teaching issues must be investigated, such as the development of students with transferable and practical skills in other business sectors and the creation and implementation of more "sustainable," adaptable, and flexible tourist teaching techniques (Abbas et al., 2021).

For these needs to be addressed, past as well as emerging literature are reviewed in this paper. This is to help researchers and professionals understand and effectively manage the impacts of COVID-19 on tourism. For such feat to be achieved, the paper suggested research areas as well as theoretical lenses that can be used in resetting and advancing industry practices. After a detailed introduction, the first section is devoted to social cost of tourism. Then, second section is attributed to Coronavirus as a crisis of tourism industry and tourism demand and tourism supply are both discussed under the context of the pandemic. Following these sections, sustainable tourism as a contemporary hot topic is discussed. Lastly, conclusion gives a brief synthesis of all these analyses. In this context, the purposes of this article are twofold. First of all, it exhibits a detailed literature analysis shedding light on the developments about a hot topic of the current tourism researches. Secondly, it gives conceptual and theoretical backgrounds for researchers and policy makers. Hence, this article can be remarked as distinctive and exceptional. It provides an alternative perception of the economic downturn's impact on tourism sector while raising awareness on the need to rethink what is already known about tourism management issues regionally. Therefore, it aims to contribute to the related literature by clarifying contemporary tourism issues and facts following by the pandemic. In this sense, policymakers, organizations, and tourism scholars will find this article informative, highly relevant, and rewarding to their needs. Authors and readers of global publications and graduate research can also view this article as a credible source of information for tourism studies across diverse geographic regions.

2. Social cost of tourism

Tourism can impact the economy both directly and indirectly. It can also affect the society at large (Khan et al., 1990). This means that it has some economic and social implications. These tend to vary to a great extent amongst stakeholders according to Mayer (2014). The problem is that most studies carried out have only focused on the economic costs/benefits of tourism as pointed out by Lindberg and Johnson (1997). Its societal costs as well as benefits haven't been paid attention to. Rather, the conceptual level is where it has been discussed (Haralambopoulos & Pizam, 1996; Liu & Var, 1986). Now, there are studies to find out more about social cost/benefits of tourism. Their areas of focus have been public services as well as traffic congestion with regards to public facilities according to Garau-Vadell et al. (2018). Rozmiarek et al. (2022) and, Freytag and Bauder

(2018) discuss the impacts of touristification and overtourism on urban traffic. Touristification and gentrification risk is being documented by more literature. In this case, environmental cost for tourism is being analyzed (González-Pérez, 2020; Gurran et al., 2020; Smith et al., 2019). Furthermore, researchers who are investigating the impact of tourism from an economic perspective have started analyzing its social costs as well as benefits in specific communities (Torre & Scarborough, 2017; Bella, 2018).

Measuring tourism societal impact is quite possible. These could be in the form of increased real estate cost (Etxezarreta-Etxarri et al., 2020), crime rate (Smith & Krannich, 1998), land and housing availability, cultural and heritage presentation (Barrera-Fernandez et al., 2019), employment within the tourism as well as hospitality industry (Stephenson & Ali-Knight, 2010), pressure on present infrastructure (Gonzalez et al., 2018), and the general well-being of individual residents (Jordan et al., 2019). It should however be noted that getting measurements like these isn't easy. This is due to the indirect as well as chronic nature of societal impacts (Milman & Pizam, 1988; Liu & Var, 1986). Based on communal values, people will have different perceptions about these (Fredline & Faulkner, 2001).

In line with findings from other studies on how crises have affected tourism, this paper suggests that negative events like such can provide a reference point through which social costs can be evaluated. According to Weaver and Lawton (2013), there has been a clear demonstration of how complicated it can be to assess social costs/benefits in such crises. It is possible for crisis to make residents have negative perceptions about tourism. According to Garau-Vadell et al. (2018), residents are more willing to support tourism during an economic crisis. This is due to how it tends to decrease their perception about tourism costs. They will begin to tolerate tourism and activities that are related to it during a period of economic crisis by attaching great value to economic development (Lindberg & Johnson, 1997). There is likely to be some variations between resident groups, engagement levels of residents with tourism (Andereck et al., 2005). On the other hand, crisis can amplify tourism's negative impact. Specifically speaking, there is likely to be increasing safety concerns when infected persons begin to visit a particular tourist destination (Epstein et al., 2007; Bajardi et al., 2011).

Weaver and Lawton (2013) recently carried out an examination of variations in the assessment of cost-benefit. This was in response to events that are contentious. There were suggestions that the perceptions of residents on tourism and its negative impact could be influenced by the media. Other factors that can influence their perceptions are ethnic backgrounds and social circles. These can also make them develop negative attitudes towards such crises. According to Rittichainuwat

and Chakraborty (2009), it is important for the negative impact of tourism to be measured especially during a period of crisis. This will help in minimizing damage caused due to negative perceptions.

3. Coronavirus is a crisis of tourism industry

COVID-19 is a crisis that has affected lives in various ways. Furthermore, it has brought about a global crisis. This has succeeded in affecting the tourism industry. It simply means businesses, places and people have been affected in various countries. This is mostly obvious in locations where tourism activities used to be very active. Tourism doesn't just generate foreign exchange. It is also a major source of development for countries. It has also supported different forms of job opportunities as well as businesses. In a nutshell, there are lots of economic activities connected to tourism. These have all felt the devastating impact of COVID-19. About 4.4% of GDP is contributed by tourism. In OECD countries, service exports are around 21.5% as pointed out by OECD (2020a). For some OECD nations, the shares tend to be higher. For instance, the GDP contributed by Spain is around 11.8%. Travel makes up around 52.3% of aggregate service exports. 8.7% and 78.3% are the figures in Mexico. In Iceland, they are 8.6% and 47.7%. 8.0% and 51.1% are those recorded in Portugal while France figures are 7.4% and 22.2% according to OECD (2020b). The tourism sector is labor extensive. Its average contribution towards employment is 6.9% in OECD nations. It is one of the major sources of employment and job creation. For instance, it has managed to help low-skilled workers gain employment. The same can also be said of workers who are highly skilled. It is a sector which has managed to employ different categories of workers – temporary, part-time, and seasonal workers. While COVID-19 and its effects continue to be felt, it is expected that most of these jobs will be adversely affected. Normally, tourism sector can ensure that diverse employment opportunities are provided. These could be for older workers, women, migrants, students, and others. Furthermore, these are in different locations like remote areas, cities, and towns. For instance, it was discovered that tourism contributes about 15.7% of the employment in Thailand. In countries like Spain, Ireland, Greece, and Portugal, its contribution rates are 13.5%, 10.3%, 10.0%, and 9.8% respectively. In the present crisis that the world is currently facing, tourism has been one of the worse-hit sectors. The aviation industry hasn't been active since March 2020 according to IATA (2020). Tourist attraction centers have been closed. Also, there have been postponement and cancellation of festivals and events around the world. In many countries, public gatherings have been greatly restricted. Based on all these, it is fair enough to conclude that COVID-19 has really impacted tourism in the most negative way. Although the sector seems to have survived other crises in the past by showing great resilience, the impact it has experienced due to COVID-19 may not go away early enough. In other

words, it may likely not recover quickly. The situation's critical nature led to the meeting of Tourism Ministers (G20 Tourism Ministers Statement, 2020) in the month of April. It was a move aimed at welcoming national efforts that would help to improve the situation of tourism. The ministers had a goal to ensure that the pandemic had minimal impact on tourism sector. Table 1 includes percentage changes in aviation industry passenger revenues with the introduction of the pandemic. The first line of the table is devoted to January 2020 figures to be able to compare the direct effect of COVID-19.

Table 1: Change in Passenger Revenues in Aviation Industry (by Region and Approximate Values)

	Africa	Asia/Pacific	Europe	Middle East	North America	World Total
January 2020	6%	3%	1%	5%	3%	2%
March 2020	-50%	-70%	-58%	-65%	-40%	-55%

Source: Check Point Certified Security Administrator (CCSA), 2020, pp. 18.

Values prove the huge impact of the pandemic on one of the fundamental industries of tourism. Although volumes are differentiated as to macro regions, huge plummets are relevant for all of them. It seems from the figures that the mostly affected macro region is Asia/Pacific in which travel and tourism activities are fundamental the regional economy. Table 2 summarizes the change in international tourist arrivals in 2020 and 2021.

Table 2: International Tourist Arrivals (Change by Region, %)

	Africa	Americas	Asia/Pacific	Europe	Middle East
2020	-69%	-68%	-84%	-69%	-74%
2021	-74%	-62%	-94%	-63%	-79%

Source: (UNWTO, 2022a).

The figures in Table 2 indicate that sharp declines in international tourist arrivals continued in 2021, too. Even some regions have experienced worse rates in 2021 –such as Africa and Asia/Pacific. This exhibits that the impacts of pandemic are still in charge. 15 million more international tourist arrivals have been experienced globally in 2021 compared to 2020 but it would be wrong to count this rate as a recovery (UNWTO, 2022a, 7). UNWTO (2022c) reports that 4% increase has been experienced in global international tourist arrivals in 2021 but the volume is still far below the pre-pandemic levels. Recovery seems slow and uneven. However, it's also observed that economic contribution of tourism in 2021 (measured in tourism direct GDP) is approximately US\$1.9 trillion. This rate is higher than the rate of US\$1.6 trillion in 2020. However, it's still below the pre-pandemic level of US\$3.5 trillion.

UNWTO (2022b) has two different scenarios about the international tourist arrivals during 2022. The first scenario expects approximately 30% increase in international tourist arrivals at the end of 2022 compared to the end of 2021 but it will be still 50% behind the pre-

pandemic level of 2019. Moreover, the second scenario expects a slower recovery with approximately 15% increase by the end of 2022 (compared to the end of 2021). It corresponds to the 63% less than 2019 volume. In both cases, recovery seems slow.

4. Tourism demand

Over the years, tourists have had lots of experiences during their trips to other locations around the world. These could be facing health risks and experiencing major disruptions. Of course, their experiences can greatly influence their attitudes towards traveling. In other words, there is a direct and positive relationship between both. The same can also be said of their future behavior and intentions. Psychiatric studies carried out to find out how traumatic experiences in the life of people have affected their behavior (Baxter & Diehl, 1998). They have been able to provide a platform for which to understand how and why tourists are responding to the COVID-19 trauma.

Yet, COVID-19 pandemic has transforming tourists' attitudes and behaviors. Recent developments show that domestic vacations and outdoor activities have become more popular. Recent trends express that traveler prefer rural areas and their average length of stay increased. They prefer to make their vacations close to their homes and long-haul travel is still perceived as dangerous. Moreover, younger tourists seem to have the greatest flexibility to travel around since they have low fear of COVID-related serious illness. However, it is evident that even young tourists began to prefer nature and outdoor activities to avoid crowds. In this sense, lesser-known destinations have become more popular (WTTC, 2020, pp. 9-10). These are the basic results of a global survey. However, there are some other researches underlining transformations in tourism demand. Polyzos et al. (2020) conducted an analysis on arrivals of Chinese tourists to the USA and Australia. They investigated that tourism demand changed significantly and recovery will take some time between 6 to 12 months. As another study, Gallego and Font (2020) used a big data of Skyscanner on air passenger searches. They investigated that desire to long-haul travel decreased significantly in all around the world. As time passes during 2020, optimism about travelling turned to pessimism. These results are remarkable since they show changing travelling behavior from long-haul to short haul. Another important study about tourism demand is the study of Nazneen et al. (2020). They investigated tourists' travelling behaviors and they underlined that pandemic affected travel decisions by decreasing long-haul travelling rates and it changed tourists' perceptions about hygiene and safety. As another recent study, Sanchez-Perez et al. (2021) conducted a survey with a large sample size in Spain and they investigated that pandemic changed tourists' preferences. They underline that conventional tourism will be less popular in tourism array and more local holidays, less use of vendors, more insurance contracting

and lower use of public transport will be in turn. All the studies and reports indicate that pandemic changed tourists' demand behaviors. What is more important is that this transformation seems permanent after pandemic and hence emerging trends will push the industry to change the tourism supply.

4. Tourism supply

Tourism supply seems to be heterogeneous. Its transformations have been caused by the pandemic. Also, the impacts tend to vary according to market segments. Business trips like sales, events, meetings, exhibitions, and conferences are expected to be reduced. To respond swiftly to the restrictions due to COVID-19, businesses have had to come up with other ways to ensure costs are minimized. The idea of remote working has been embraced by most businesses via team working, conferences, virtual meeting, and others. Also, companies have had to review their travel plans to remove non-essential traveling activities.

There is every reason to believe that business traveling will not remain as it once was in the past years. However, leisure travel will experience a major boom after restrictions have been lifted for COVID-19. This is expected to take place within regions. It will be in another way though as compared to what we were used to. Given that COVID-19 is still in our midst, there are lots of factors that will likely influence the location people will decide to travel to. These could be active social distancing measures, social/public gathering restrictions, and mobility tracing. This will influence the travel experiences of most tourists.

Companies in the tourism sector are fighting to survive now. They are struggling to ensure employees and customers are safe. There is also the need for brand image to be protected. Cash liquidity is also another issue. Companies in the sector are also trying to ensure that safety procedures are followed to prevent any spread of coronavirus. For instance, cleaning procedures have been upgraded through the adoption of new standards. There has also been restraining of staff. Majority of companies tend to promote hygiene certifications accredited by reputable associations. In a bid to stop the spread of coronavirus, companies are training their staff. This is to enable them to develop the ability to identify cases related to the virus. Airports, hotels, restaurants, and others are trying to have their workplaces re-engineered. This is to ensure they are contact-free (Higgins-Desbiolles, 2020). Mobile applications are developed for check-out, check-in, mobile payments, room keys, making bookings/purchases, and many more. There are in-room technologies for e-shopping and entertainment. Websites now have chatting features for easy communication with customers. It is typically an industry where artificial intelligence is expected to be dominant for years to come.

Also, new business environments have been created via the emergence of COVID-19. Companies are now beginning to think of how to carry out their activities differently without the need to come in physical contact with customers. For instance, new technologies have been adopted. Also, applications have been developed to help manage crowds effectively. This could be in places like shopping malls, hotels, restaurants, museums, and airports. There is health equipment on ground like hand sanitizer and face masks to help in reducing how the virus spreads (Gössling et al., 2020).

Through studies, it will be very possible to find out how tourism operators are strategizing to bounce back from this setback. They can also help to make recommendations on how such strategies will be implemented. Studies like these may prove to be very useful. However, they may not offer much when it comes to how the tourism industry can recover back to its normal state. Research on COVID-19 is meant to enable the industry to reimagine as well as implement an enabling environment where business activities can thrive. These strategies should consider well-being values, and sustainability. Also, they should be human-centered.

5. Sustainable tourism

This is the right time when sustainable as well as equitable tourism can be promoted (Gonia & Jezierska-Thöle, 2022; Grube, 2022; Benjamin et al., 2020;). According to Carr (2020), genuine cultural sites usually denote conventional ecological information, environmental responsibility, physical condition, and happiness. These sites have a very crucial role to play in cultural sustainability and its future. For the economy to develop, they have to be properly managed. There is need for reorganization of the tourism industry in the post COVID-19 era. This shouldn't be based on paperwork but actual planning. Awareness is supposed to be created on racial healing, social justice, environmental justice, and education. Measures like these will benefit all the stakeholders of the tourism industry (Stankov et al., 2020). These could be government, SMEs, local communities, and tourists. According to (Higgins-Desbiolles, 2020), weak and harmful tourism should be encouraged by the market players. This is very important to ensure a tourism industry that is sustainable is setup. There is a huge difference between the campaigns of World Tourism Organization (UNWTO) and what is being exercised in terms of growth expansion. It is important that these are aligned for long term growth and progress to be achieved. These are very important for the industry's future (Brouder, 2020; Nepal, 2020). Sustainability can be recreated in the tourism industry due to the ongoing deglobalization process. This will be done by overcoming the setbacks that have been experienced in previous years like congestion, economic abuse, and environmental deprivation (Niewiadomski, 2020). The process of sustainability is continuous for positive outcomes to be attained. It is explained by changing of

beliefs, skills, information, wishes, and beliefs (Galvani et al., 2020). For sustainable tourism to become a reality, experience and knowledge will have to play a very crucial role (Chang et al., 2020; Prideaux et al., 2020). Cruise tourism industry needs to consider the possibility of approving a local model as explained by Renaud (2020). This implies that activities of large cruise ships should be discouraged. However, smaller ships need to be given more opportunities. Self-sacrifice, social unity, and compassionate attitude are very crucial just like the practice of wearing facemasks which people are using to protect themselves. The post-COVID-19 era is going to give people the opportunity to come up with new ideas and thoughts that will help revamp the tourism industry. For instance, many activities will be adjusted to favor local communities. This may sound much better to people who love the idea of short distance travels. For the sector to be transformed, it is important to have a much better understanding of challenges remote communities are facing (Tremblay-Huet, 2020). There are studies which claim that periods like these can help to reset the industry (Higgins-Desbiolles, 2020). Domestic tourism has been the most preferred option for developed countries.

6. Conclusion

COVID-19 is altering tourism researchers' study agendas (Sharma et al., 2021). The epidemic has raised awareness of the importance of travel experiences and consumption for individuals (Saarinen & Wall-Reinius, 2021). Furthermore, the pandemic is still having a large influence on the tourist industry and is expected to have a significant impact on future landscapes (Gössling et al., 2020). There is already significant international evidence of global shifts in both consumer demand and the patterns of domestic tourism.

Wen et al. (2020) contend that COVID-19 may be predicted to have in depth effects on domestic visitors' consumption behavior, while acknowledging cultural variations. Regardless of the possibility of vaccinations, the residual effects of the pandemic on the human psyche will guarantee that a restoration to pre-COVID-19 normalcy should not be assumed (Zenker & Kock, 2020). According to Sigala (2020) tourism demand is very heterogeneous, hence the repercussions and alterations generated by the COVID-19 vary across different tourism markets. Butler (2020) emphasizes the significance of distinguishing between business and leisure tourism when examining the potential short-term consequences of COVID-19. If COVID-19 is not eliminated, the measures of some important facts such as social distance, avoidance of mass gatherings will impact tourism experiences of tourists (Jeon & Yang, 2021). However, business tourism is the category most likely to revert to the previous standards (Rwigema, 2020).

This study emphasized the overall effects of the COVID-19 epidemic on several sectors of the tourist business. Throughout the many COVID-19 waves, there were

disparities in the amounts of influence on local tourism locations. The pandemic's impact on local destinations has generally resulted in a wide range of negative effects, including significant losses in tourism revenues, decreases in tourist arrivals, inadequacy of destination exploitation capacity, the closure of tourism-related services, and increase in the unemployment rate. In terms of influence, the pandemic has affected all tourism firms, ranging from serious to extremely serious.

As Arlı and Bayırhan (2021) stated in their paper, the epidemic began to alter corporate practices, personal priorities, and behaviors. In nations with several sub-areas for maritime tourism, such as Turkey, the yachting industry sector has seen a considerable drop in recent years. They discovered that if COVID-19 remains in effect, entrepreneur boat operators will be able to retire from entrepreneurship, sell their boats, and transition to another line of business. On the other side, Atsız (2021) discusses an alternate technology instrument for moving while considering physical distance in such a crisis. Given that visitors would not travel to every destination or choose places with less human connection, tourism firms might alter their products and services with VR technology. Continuous, dependable, and touchless travel and instructional tools will be applied to VR technology in the hospitality and tourist industries, and this technology is considered as the primary tool for travelers and service providers in terms of tourism revival. Furthermore, this minimal human involvement technology allows them to boost their experience quality, service offers, and human capabilities. So, the tourist and hospitality industries should employ this technology to build awareness, advertise, solidify their brands, and acquire the confidence of potential clients through targeted marketing. In addition to the above studies, Hoque et al. (2020) investigate the influence of the corona virus outbreak on the Chinese tourist business. The findings of the study reveal that the presence of Coronavirus in China has far-reaching consequences throughout the world. Because of the viral threat, outsiders are afraid to visit China. What is more is that Chinese tourists are barred from visiting other countries. The rapid spread of the Corona virus in China has disrupted people's everyday lives. This anxiety has had an influence on the country's tourist economy both locally and abroad. This has had a significant impact on the country's economy. The intensification of the Coronavirus is expected to have a long-term impact on China's tourism economy.

Importantly, the volume of future domestic tourist demand will be intimately tied to the success of the national economy. Under situations of poor or no economic development, which are compounded by COVID-19 economywide repercussions, the possibility for expanding demand for any tourism products may be restricted. With this essential proviso in mind, the findings of this study inquiry lay the groundwork for the

Ministry of Tourism to shape the tourism sector's supply and demand to fulfill the needs and changing wants of the world's domestic visitors in the COVID-19 environment.

Therefore, the COVID-19 pandemic brought some new ideas into tourism sector as well. According to Gössling et al. (2020), global tourism system may be oriented towards the Sustainable Development Goals (SDGs) more and more. Acting compatible with the SDGs will also induce the tourism and travel sector. Within the decreasing number of flights, and the increasing videoconferences or online meeting, the need for transportation may reduce. However, the income effect of this shrinking tourism activities may be eliminated with an effective government subsidy or supports directly to the tourism and travel sector. In this respect, travel and tourism companies may also propose new or updated products concerning the customers' expectations and needs. Within this new era with living with the fear of coronavirus, the safety and the health of the customers and the workers should be carefully considered with the adoption of the effective precautions (Orîndaru et al., 2021).

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INFO PAGE

How covid-19 has affected supply and demand within tourism industry?

Abstract

There is no doubt that coronavirus has succeeded in crippling businesses and people worldwide. It has led to unprecedented economic crisis in countries around the world. The tourism sector isn't an exception to its devastating impacts. The virus has succeeded in affecting not just the economy. In addition to such, job opportunities, and regional developments in local communities have been greatly affected. Tourism throughout the world has been stagnant since the month of April 2020 due to the advent of COVID-19. Given this temporary problem, economies and employment rates have been affected to a great extent. Also, local communities around the world are struggling to survive. In most countries, 50% the revenue generated from exports is contributed by tourism. This means it is a major contributor of GDP (Gross Domestic Product) as well as employment. The major aim of this paper is to carry out an objective review that can enable researchers and experts understand as well as manage the impacts of COVID-19 on tourism. For this to be achieved, this paper discussed the transformational opportunities presented by COVID-19 including questions that it raises. The paper attempts to identify pre-assumptions, institutions, and fundamental values which the tourism industry including other academia need to challenge for development to be achieved. Furthermore, the paper discusses the major impacts, experiences and behaviors being experienced by the 3 stakeholders in the tourism industry – social cost, supply, and demand. Just as measures have been adopted by countries to ameliorate the situation, recommendations have been put forward to ensure speedy recovery of the sector.

Keywords: Crisis, Resilience, Recovery, Socioeconomic impacts, Covid-19

Authors

Full Name	Author contribution roles	Contribution rate
Gül Şerife Huyugüzel <i>Conceptualism, Methodology, Writing - Original Draft, Writing - Review & Editing</i> <i>Kişla:</i>		34%
Burcu Türkcan: <i>Conceptualism, Resources, Writing - Original Draft, Writing - Review & Editing</i>		33%
Meltem Ince Yenilmez: <i>Conceptualism, Methodology, Writing - Original Draft, Writing - Review & Editing</i>		33%

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This paper does not required ethics committee report

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