

Article

Tourism Sustainability and COVID-19 Pandemic: Is There a Positive Side?

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Abstract: The COVID-19 pandemic has wreaked havoc on the tourism industry like never before, resulting in massive losses of revenue and jobs around the world. Accordingly, the pandemic exacerbated the already existing sustainability challenges of the tourism industry. However, there is also a positive side of the pandemic which is often overlooked by international scholarship. Thus, the present study aims to review the extant literature in the area of COVID-19 and the tourism industry's sustainability and resilience in future crises. Through a synthesis of secondary data, it was possible to bring attention to the negative as well as the positive effects of COVID-19 on the global tourism industry. This article contributed to a better understanding of the positive side of the pandemic in terms of rethinking, resetting, and redefining the industry in a more sustainable way. The study lays out a conceptual framework for tourism managers and destination planners to identify the pandemic as an opportunity and adopt sustainable solutions to deal with the post-pandemic challenges, thereby developing more sustainable and resilient tourism businesses and destinations.

Keywords: tourism industry; COVID-19; sustainability; tourism resilience



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1. Introduction

The advent of the novel coronavirus disease in the year 2019 has been one of the most shocking events of the century. The pandemic has brutally affected the physical, social, mental, and economic well-being of the people around the globe. COVID-19 has contributed to snatching the lives and livelihoods of billions of people on the planet. According to the World Health Organization [1] a total of 521,920,560 confirmed cases of COVID-19, comprising 6,274,323 deaths, have been recorded globally as of 16 May 2022. Around 114 million individuals in the world lost their employment during 2020 as a result of the massive lockdowns enforced to control the transmission of the virus [2]. The terrible impact of the pandemic on various sectors of the world economy raises concerns before policymakers and stakeholders.

Unlike any other sector, tourism remained the most devastated sector of the global economy during COVID-19 [3–9]. The severe impact of the pandemic on all aspects of travel and tourism has exacerbated the already prevailing sustainability challenges [10–12]. In fact, the likelihood of a more frequent incidence of such crises in the future [13] signals a need to rethink tourism sustainability in the light of major event crises such as COVID-19 [14,15]. Therefore, the advent of COVID-19 has once again raised the question of tourism sustainability before decision makers [7,16–18]. Though large-scale vaccination across nations has led to the improvement of the situation, there is a significant need for sustainable practices to deal with the after-effects of the pandemic in the new normal.

Along with the long-lasting negative impacts sparked by the pandemic on the global tourism sector, there are certain positive impacts such as the opportunity to engage in corporate social responsibilities (CSR) [19], decreases in tourism-related greenhouse gas (GHG) emissions [20], the emergence of the new forms of tourism [21], the identification of

technological solutions [22], a halt to the scenario of over-tourism [23], etc. Additionally, the pandemic has allowed the global tourism industry to escape from the unsustainable and irresponsible practices of the pre-pandemic tourism industry [24,25]. Consequently, COVID-19 has been recognized as an opportunity to build a more resilient and sustainable industry in the post-pandemic era [26–28]. As a result, while looking for strategies to mitigate the adverse effects of pandemics, it is also critical to look at the positive side of the pandemic.

The positive side of the pandemic is often overlooked by international scholarship [29], but the clarification of both positive and negative impacts is necessary for developing a sustainable strategy to deal with major event crises such as pandemics [30]. Unlike any other industry, the ruinous impact of the pandemic on tourism calls for a sustainable strategy to ensure more resilient and viable growth [9,31–33]. Thus, the present study has been conducted with the aim to review the extant literature in the area of COVID-19 and the tourism industry's sustainability and resilience in future crises. The particular objectives of this review are: (1) to cast light on not only the negative but also the positive impacts of COVID-19 on the tourism industry; (2) to determine the potential challenges and corresponding solutions for the sustainable development of the tourism industry in the post-pandemic era; (3) to develop a conceptual framework of tourism sustainability in the light of the COVID-19 pandemic.

As a method of research, we synthesized the secondary data available on a wide range of topics that are relevant to COVID-19 and tourism sustainability and resilience. The selection of papers was based on two principal criteria: first, the paper provides the latest and most up-to-date findings on tourism sustainability; second, the paper discusses tourism sustainability in the light of COVID-19. For that reason, only the papers published on "COVID-19 & Tourism Sustainability" after the incidence of the pandemic were extracted from the Scopus database for the purpose of review. This article has contributed to highlighting the positive side of the pandemic alongside its negative impacts on the travel trade. Considering the possibility of the frequent occurrence of such crises in the future [13,34], this study corroborated the potential challenges and suitable practices using a conceptual framework that can help to build a more resilient and sustainable industry in the post-pandemic era. Additionally, the present research has contributed to deciphering and synthesizing the latest literature on tourism sustainability that evolved during COVID-19. The three prominent questions that this study intends to answer are: (1) Has the pandemic had any positive impact on the tourism sector? (2) What are the potential challenges and corresponding solutions for the sustainable development of tourism in the post-pandemic world? (3) Which framework addresses tourism sustainability in the face major event crises like COVID-19?

2. COVID-19 and the Responses of the Tourism Industry

The eruption of COVID-19 has widely affected the sustainability of the tourism industry and has had wide-ranging impacts on destinations [35,36], bringing global tourism activities to a halt [37]. The occurrence of crises has unprecedentedly transformed the reality of tourist destinations worldwide by producing an unusual scenario of under-tourism [5,38–40]. As stated by Värzaru et al. [15], "beaches and resorts were empty, cities were deserted, people's movements were stopped, and travel among different territories was strictly controlled" (p. 6956). Thus, the sudden onset of the pandemic created a scenario of under-tourism or zero tourism from one of over-tourism.

As observed by Marome and Shaw [4], the businesses in the service and tourism sector that account for a large proportion of jobs became financially insecure during COVID-19. A robust decline in the demand experienced by the tourism industry during the peak season of 2020 persuaded business organizations to respond through large-scale employee lay-offs [3,8,38,41,42]. With an enormous fall in tourism demand resulting from lockdowns and border closures, the pandemic has affected the well-being of local communities that majorly depended on tourism for their livelihood [15,43]. The abridged demand for world

tourism is sparking a deep economic crisis not only for local communities but also for other stakeholders associated with the tourism sector [18,44]. The devastating impact of COVID-19 on global GDP and employment has revealed that external factors can significantly curtail one of the key industries of the national and global economy [45,46]. Thus, the incidence of coronavirus crises has exacerbated the sustainability challenges that are historically associated with tourism development [10,11].

The tourism industry's response in terms of safety and quality management is an indispensable element to dilute the sustained impact of the pandemic [8,47]. One of the key efforts to foster safe corridors and sustainable tourism amid COVID-19 was the creation of a "travel bubble", an agreement between two or more neighboring countries to allow citizens to travel amongst themselves without quarantining [48]. Other efforts include the promotion of live streaming experiences [49], medical tourism [50], regional tourism [31], virtual tourism [50,51], staycation programs [52,53], "untact" tourism [54,55], and the expansion of creative tourism in rural areas within the purview of sustainable development [17] to mitigate the tremendous impacts of the pandemic on the global tourism industry.

In times of crisis, it became imperative for tourism businesses to develop strategic approaches that can spawn a competitive advantage and cover regional tourism [31]. Indeed, the pandemic made it essential for tourism to learn, reflect, and work under new circumstances within the framework of sustainable development [17]. Consequently, tourism stakeholders were required to contemplate various sustainability issues while determining the strategy for tourism development amid COVID-19 [12,56].

3. Pandemic as an Opportunity, the Positive Side of COVID-19

Along with its wide-ranging negative impacts, crises engendered by COVID-19 can be understood as an opportunity to trigger greater sustainability in the pre-pandemic travel industry [28]. According to Ost and Saleh [26], through the lens of Schumpeter's creative destruction, the current crisis can be perceived as an opportunity to induce more innovations and creativity in the tourism industry which would contribute to resilience and sustainability. For instance, COVID-19 provided travelers with an opportunity to seek new forms of tourism, such as six-feet tourism, staycations, workcations, etc. [21]. The development of such new forms of tourism that are in line with safety protocols is evidence of "innovations to lead the way during difficult times". Thus, continual innovations with respect to new forms of tourism with proper planning and better organization can help the industry survive during times of crisis.

One of the most significant and positive impacts of the pandemic on global tourism sustainability is the decline in greenhouse gas (GHG) emissions from tourism-related activities [20]. Not specific to tourism, but in general, He and Harris [19] argued that the pandemic presented businesses with an opportunity to genuinely participate in corporate social responsibilities (CSR) by fulfilling urgent social and environmental needs. Other positive outcomes of the pandemic on the tourist industry include the promotion of eco-friendly products, an increase in nature-based tourism activities, the emergence of new destinations, greater standards of hygiene and sanitation, and an accelerated awareness of safeguarding biodiversity [57].

The most unprecedented decline witnessed by the tourism businesses during the pandemic persuaded them to accelerate the implementation of innovative digital technologies in their operations [58]. In essence, the pandemic shifted the tourism industry toward more creative and sustainable dimensions by encouraging the use of technological solutions such as virtual reality, internet tours, augmented reality, artificial intelligence, and other cutting-edge technologies that comply with the COVID-19 protocols [22]. The application of such human-machine interactive (HMI) technologies in the tourism industry can lead to smarter and more sustainable destination strategies while also offering tourists a more sophisticated experience [59].

The pandemic also presented a need for tourism suppliers to rethink tourist behavior and trigger more sustainability by offering opportunities and information to the travelers to reflect responsible behavior [35]. In essence, the pandemic can be perceived as an opportunity to ponder the unsustainable practices of the pre-pandemic tourism industry and induce quality tourism, responsible behavior, and technological footprints to trigger greater sustainability [23]. In this way, the current crisis may be recognized as an opportunity to incorporate responsible behavior in the present-day tourists to avoid the pre-existing phenomenon of over-tourism and unsustainable practices.

In the view of Sumanapala and Wolf [25], COVID-19 has offered an unusual opportunity in the form of travel restrictions, which gave temporary relief from the environmental impacts of unsustainable tourism practices such as the overutilization of nature-based tourism destinations and disturbance to wildlife. Indeed, the current situation must be encased to “reset” the tourism industry in the frame of sustainability, especially in developing nations, by keeping a check on the carrying capacity of the destinations and on unsustainable tourist practices [24,25].

Following the pandemic, tourism stakeholders decided to make crisis management an integral part of their strategic planning in order to strive for greater sustainability and better preparedness for future crises [60]. The adoption of effective crisis management is crucial to uphold a destination’s reputation [61] and for developing a significant strategy to withstand similar crises in the future [62]. Therefore, the lessons from COVID-19 compelled the tourism stakeholders to understand the importance of crisis management in dealing with major event crises.

In order to prevent, control, and respond to infectious diseases at present as well as in the future, the pandemic presents an opportunity for interdisciplinary research and collaboration between tourism and health sectors to devise sustainable and effective health crisis management strategies [63,64]. The actualization of such an interdisciplinary approach to research and collaborative decision-making among tourism and health sector stakeholders can help in the resilience and sustainable development of the tourism industry while keeping the social and economic well-being intact during times of major event crises such as COVID-19. As observed by Higgins-Desbiolles [65], the pandemic has stimulated transformational thinking among tourism scholars in terms of exceeding ecological limits, climate change, and socio-cultural strains, spawning from modern economic systems that produce significant inequality and injustices. The prevalence of such transformational views in academia is also a positive side of the pandemic, which can result in the identification of ways and means to ensure the sustainable development of tourism as a whole.

4. Tourism Sustainability in the Post-COVID-19 Era, Big Challenges Ahead

The pandemic of COVID-19 has proven to be one of the biggest challenges in the history of the travel and tourism sector of the global economy [25]. At this juncture, the profound impact of COVID-19 on the tourism and hospitality sector of the world economy indicates the need to properly address the social, economic, and environmental aspects of sustainability [66].

Pondering the recovery of the industry in the post-pandemic world, it is still uncertain whether tourists will actively resume their normal habits outside of their homes in the near future [9,66]. This has made tourism businesses further vulnerable by deterring their efforts to undertake successful planning [67].

According to the views of some scholars, global tourism is anticipated to resume its position in the post-COVID-19 era, while the issue of climate change will continue to constrain industry development [4,68]. Alongside this, the anticipated increase in tourism in the aftermath of COVID-19 can result in higher levels of air and water pollution [4]. Thus, the rapid recovery of the tourism industry in the post-pandemic world, if not checked properly, can lead the tourism industry away from ethical, responsible, and sustainable development of tourism [65]. Thus, the biggest challenge for the tourism industry at

present is to escape the unsustainable practices of the pre-pandemic tourism industry and strategize for a sustainable future.

The tourism industry's stakeholders can encapsulate the environment and social protection by forming alliance strategies to recover and survive in the post-pandemic world in a more resilient and sustainable manner [69]. Moreover, a blend of scientific discovery, digital infrastructure, new regulations, and city planning can lead the cities to effectively deal with both health crises and climate change [70].

The torment caused by the pandemic calls for transformative decisions of tourism practitioners and policymakers to reactivate tourism sustainably [5,35,65] within the framework of innovations and creativity [23,26,41,71]. Transformational change should not only focus on finding a solution for socio-economic crises posed by COVID-19, but various political, social, and market players also need to contemplate further innovations, investments, and efforts to realize a climate-neutral world in a post-pandemic era [72].

To ensure a pre-emptive response and the prompt recuperation of travel demand, there is a need for an approach that can be consistent in the long run [73]. In essence, devising a sustainable strategy of operation is a highly significant question for the development of tourism in the post-pandemic era [9,32] because the pandemic has caused only a short-term halt to the pre-existent scenarios of over-tourism and unsustainable practices [23,24].

5. Best Practices to Secure a Sustainable Future

The lessons learned from COVID-19 are alarming for scholars and industry practitioners, prompting them to devise a set of practices that can lead the travel and tourism sector of the global economy towards sustainable development. According to Chang and Wu [47], the sustained impact of the pandemic needs investigated practices for the decision-making of stakeholders and the implementation of sustainable development.

According to Wolf et al. [74], in the light of the rising carbon footprint of the tourism industry, which has become a significant contributor to ecological imbalances, the adoption of green practices must be prioritized by the policy makers to increase resilience and the ensure sustainable development of the transforming tourism sector. At this juncture, it is imperative to promote actions and initiatives about the conservation and rational usage of resources. The continual proliferation of unsustainable practices on both the demand and supply sides would not only cease the touristic appeal of the most popular destinations, but also make them inhabitable for host communities in the long run.

The acceptance and long-term adoption of digital solutions that can help to reduce emission levels by controlling the number of trips can be adopted as an online alternative for unsustainable practices [75]. To achieve efficiency in hospitality and leisure operations, the solutions in the form of robotic devices, AI-enabled services, and biosensors can yield positive impacts and create a sustainable environment for existing and emerging businesses [42]. Thus, technological advancements to leverage sustainable development and their applications in the tourism industry can be accepted as one of the feasible solutions to cope with major event crises such as pandemics in the future.

According to Fusté-Forné and Michael [48], the travel bubbles created to foster safe corridors have been a significant instance of achieving sustainability through a cooperative regional approach. Travel bubbles shall be implemented as a strategy to achieve sustainable development in proximity destinations as a part of the new normal. Chang and Wu [47] underlined that travel bubble zones should maintain both safety and quality under the government policies of the participating countries and regions. The maintenance of these travel bubbles can serve to sustain international tourism activities not only in the new normal but also in the events of potential crises. In the view of Figueroa and Rotarou [76], responsible governance, the management of natural resources and related tourism activities, addressing environmental issues, the diversification of products, and the elevation of innovative and personalized tourist experiences are key to ensuring resilience as a part of future health- and environment-related crises.

On the supply side, quality management incorporating health and safety standards shall be accepted as a critical factor that can offer directions to the stakeholders for making important decisions [47]. Improving service quality and taking advantage of existing tourism facilities instead of exploiting resources for unnecessary construction should be prioritized to yield the most rewards while complying with sustainability standards [9]. As observed by Carlisle et al. [77], the development of sustainability skills among hospitality and tourism staff through proper training will help to address the issues of green and soft skill gaps among employees. It becomes more necessary in the current scenario when the industry is transforming in the light of COVID-19.

On-demand side, the use of active transportation modes such as cycling and walking should be exploited to boost sustainable mobility in the aftermath of COVID-19, [44,78]. This would offer a significant approach for negotiating climate change, improving air quality, and subsequently mitigating the health issues encountered by society [79]. In addition, the responsible behavior demonstrated by tourists in terms of both on-site activities and travel choices during the pandemic should be encouraged to assign tourists the responsibility for sustainable development [35].

Altogether, the RESPOND framework suggested by Pandey et al. [8], i.e., restarting tourism, establishing protocols, stimulating demand, promoting coordination among stakeholders, operationalizing the new normal, nurturing new options, and developing digital solutions, should be adopted to sustainably recover from the economic, socio-cultural, and psychological impacts of the pandemic on various stakeholders. The adoption of the aforesaid practices can help in future crisis preparedness, and can thereby pave the way for a sustainable future for the tourism industry and its multiple stakeholders.

To sum up the literature review and all the main topics analyzed by authors in the last two years, Table 1 depicts a list of the key impacts of COVID-19 on the tourism industry. It can be observed from Table 1 that although the pandemic has sparked deep and long-lasting negative impacts on the global tourism industry, the significant positive impacts must not be overlooked. Some of the important positive impacts of the pandemic on the global tourism sector include reductions in the emission levels of greenhouse gases from tourism, more awareness about hygiene and sanitation among tourists and service providers, the advent of digital solutions for the operations of tourism businesses, an increased environment sensitivity, an upsurge in domestic tourism, the evolution of new forms of tourism, the creation of travel bubbles, etc. In essence, COVID-19 has brought a moment of pause to the scenario of over-tourism and unsustainable practices that existed in the pre-pandemic tourism industry, and offered time to rethink, reset, and redefine the industry more sustainably. Most of the research in 2020 focused on the negative impacts of COVID-19 on the tourism industry; however, after that dark year, researchers centered their attention on the measures and strategies, on both the offer and demand sides, to overcome the crisis, making tourism businesses and destinations more resilient and sustainable in the future.

Table 1. Global impacts of COVID-19 on the tourism industry.

S.N.	Global Impacts of COVID-19 on the Tourism Industry	Literary Evidence
1.	COVID-19 ceased the global tourism activities and caused a paradigm shift from over-tourism to under-tourism or zero tourism.	[5,15,37]
2.	The pandemic led to a drastic fall in tourism demand which had a strong negative impact on the turnover of tourism businesses. This led the travel companies to respond with massive employee lay-offs.	[4,38,41,42]
3.	The dramatic drop in tourism demand placed the livelihood of a lot of local communities in peril.	[15,43]

Table 1. Cont.

S.N.	Global Impacts of COVID-19 on the Tourism Industry	Literary Evidence
4.	Multiple stakeholders in the tourism industry, such as host communities, tourism enterprises, employees, and so on, experienced profound economic crises as a result of the pandemic.	[18,44]
5.	The tourism industry saw a decline of more than 70% in international tourist arrivals.	[38,80]
6.	The global tourism industry suffered a loss of around \$4.5 billion, while 62 million people lost their jobs during 2020.	[81]
7.	The devastating impact of COVID-19 on all the aspects of travel and tourism has worsened the already existing sustainability challenges that are historically associated with tourism industry.	[10–12]
8.	COVID-19 can also be perceived as an opportunity to embed more resilience and sustainability in the pre-pandemic tourism industry.	[26–28]
9.	The pandemic provided short-term relief from the pre-existing unsustainable and irresponsible practices.	[23–25]
10.	The pandemic stimulated creativity and innovation in the tourism industry.	[22,58,59]
11.	The pandemic triggered more responsible behavior among tourism stakeholders.	[23,35]
12.	The pandemic has fostered crises management in the strategic planning of tourism stakeholders.	[60–62]
13.	Travel restrictions triggered by the pandemic provided relief from the environmental impacts of unsustainable practices.	[25,82]
14.	The evolution of new forms of tourism, such as “untact” tourism, staycations, workcations, six-feet tourism, creative tourism, etc.	[17,52,53,55]
15.	The pandemic shifted the tourism stakeholders towards safety and quality management.	[47,83]
16.	The creation of travel bubbles to foster safe corridors and regional cooperation.	[47,48]

6. COVID-19 and the Conceptual Framework of Tourism Sustainability

In the review of the main literature regarding the impacts of COVID-19, it was possible to observe a significant number of key topics centered not only on the negative outcomes of the pandemic but also on positive ones. The consideration of both the positive and negative outcomes of any event is necessary to develop a sustainable strategy [30]. In our viewpoint, although there is an overarching need for a sustainable strategy to deal with the negative impacts of the pandemic, it is also crucial to sustain the positive side of the pandemic, such as a halt to the scenario of over-tourism, more responsible stakeholders, and increased regional corporation through travel bubbles. Thus, along with a strategy to deal with the challenges of the pandemic, tourism stakeholders need to take lessons from the pandemic and sustain the positive outcome to secure pre-pandemic growth and progress towards a sustainable future.

A conceptual framework developed by Tiwari and Chowdhary [23] claims that in the absence of any sustainable strategy, the tourism industry in the aftermath of COVID-19 will again return to the pre-pandemic over-tourism and unsustainable practices. Therefore, there

is a need to identify sustainable solutions to deal with the challenges of COVID-19 in the post-pandemic world and sustain the responsible practices witnessed in the stakeholders' behavior during the pandemic. The framework of Vulnerability and Resilience of China's Tourism Supply Chain (TSC) by Bai and Ran [84] provides an understanding of TSC management under major event crises. Their framework reveals that TSC has the strength to recover and seize the opportunities for innovation and transformation through the united efforts of all the stakeholders. Though this model offers significant insights into tourism supply chain management in the face of black-swan crises such as pandemics, there is still a need for a framework that can help to identify sustainable solutions for specific challenges presented by COVID-19. Another conceptual framework for tourism sustainability amid COVID-19 crisis by Ullah et al. [85] showed a relationship between community satisfaction, smart destinations, and sustainable tourism. Their study argued that community plays a vital role in sustaining tourism amid the coronavirus crisis. Even this framework did not explore any significant solution to deal with the challenges posed by the pandemic.

The authors in the present study focused their attention on the identification of sustainable measures and solutions to deal with the challenges presented by the pandemic. This can help to make the tourism industry more resilient in the face of present and future crises. The conceptual framework shown in Figure 1 is divided into three phases: pre-pandemic, during the pandemic, and post-pandemic. The *pre-pandemic* industry featured both high growth and an abundance of unsustainable practices. While the industry *during COVID-19* witnessed a halt to the pre-pandemic scenario of over-tourism and unsustainable practices, there was a massive fall in demand, employment, foreign exchange earnings, and tourism contribution to the GDP. Thus, there are both positive and negative sides of the pandemic with respect to tourism sustainability. The positive outcomes of the pandemic and the resilient strategies devised to mitigate the adverse effect of the pandemic need to be maintained for the future to secure sustainable growth. The lessons learned during the pandemic will contribute to transforming the pre-pandemic unsustainable growth into post-pandemic sustainable growth. Such a transformation is necessary to reactivate tourism sustainably in the post-pandemic world [5,35]. In the third and the most crucial *post-pandemic* phase, the authors presented the potential challenges for the tourism industry in the face of crises and provided corresponding solutions to ensure more sustainable and resilient growth. A combination of these solutions can fulfill the need for a sustainable strategy of operation raised in previous studies (e.g., [9,12,32,56]).

The conceptual framework in Figure 1 can be helpful for tourism managers and destination planners to identify and sustain the positive outcomes and resilient strategies that evolved during the pandemic. Additionally, and most crucially, this framework can assist them in understanding the post-pandemic challenges for the tourism industry and in adopting sustainable solutions to deal with them, thereby developing more sustainable and resilient tourism businesses and destinations. This research contributes to the existing body of knowledge by proposing a framework to advance the unsustainable and rapidly expanding pre-pandemic industry towards a more resilient and sustainable development path.

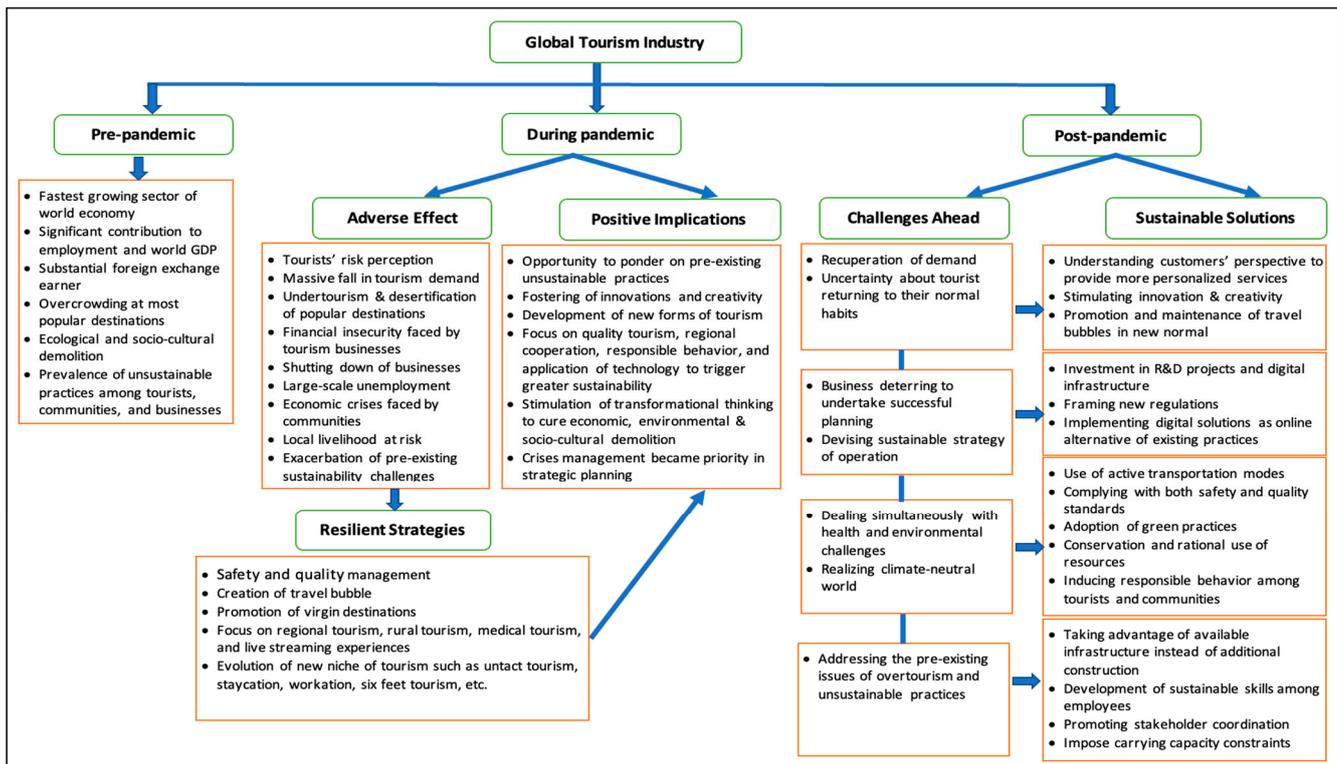


Figure 1. COVID-19 and the Travel Trade: A Sustainability Framework. Source: Authors' own elaboration.

7. Discussion and Conclusions

Prior to the outbreak of the pandemic, tourism was among the high-growth and priority sectors of the global economy. In the year 2019, the tourism industry exclusively contributed to 10.4% (USD 9.2 trillion) of global GDP, 10.6% (334 million) of world employment, and 6.8% (USD 1.7 trillion) of total exports [81]. International Tourism Highlights of the World Tourism Organization claims 2019 as the tenth consecutive year of sustained growth [86]. This shows that tourism remained one of the effective engines of economic growth and prosperity at the global level, helping millions of people secure a better livelihood. Notably, with high growth comes high responsibility. Even in the pre-pandemic era, the sustainable management of tourist destinations while keeping pace with prevailing growth rates and ensuring the well-being of all stakeholders endured a significant challenge for tourism planners. Alongside tremendous growth and significant economic contributions, Tiwari and Chowdhary [23] underlined the prevalence of over-tourism and unsustainable practices in the pre-pandemic tourism industry. Thus, the pre-pandemic era can be attributed to the phase of unsustainable growth.

The incidence of the coronavirus pandemic towards the end of 2019 transformed the reality of the global tourism industry. The governments of different countries across the globe imposed strict restrictions on international and even domestic mobility. This led the tourism industry to suffer unprecedented losses. According to UNWTO [80], the year 2020 was the worst year in the history of tourism, witnessing a 74% (about one billion) drop in international tourist arrivals. Border closures, nationwide lockdowns, and the perception of the risk of disease transmission due to travel were the prime factors that prevented people from taking tours. This resulted in a massive fall in tourism demand at the global level, leading to a scenario of under-tourism or zero tourism from one of over-tourism [5,38–40]. Such a sudden and massive fall in demand caused financial losses to the tourism entrepreneurs, leading even to the shutting down of many businesses. Consequently, there were deep economic crises, losses of local livelihoods, and large-scale unemployment at the global level. According to WTTC [81], the global tourism industry

suffered a loss of around 4.5 billion USD in the year 2020, while 62 million people lost their jobs during the same year. This implies that COVID-19 has exacerbated the already existing sustainability challenges and has thereby compelled tourism professionals and scholars to rethink tourism sustainability.

As a strategy to deal with crises, tourism stakeholders responded with safety and quality management. This was viewed as a crucial element to dilute the sustained impact of the pandemic [8,47]. One of the most significant strategies to sustain tourism during the pandemic was the creation of “travel bubbles”. Fusté-Forné and Michael [48] outlined travel bubbles as an approach to foster safe corridors while enriching regional cooperation among participating countries. To comply with social distancing and avoid physical touch, tourism planners promoted virgin destinations and regional tourism. In addition, rural tourism, medical tourism, and live streaming experiences were prevalent during the pandemic. In line with the need of the time, some new forms of tourism became dominant, such as “untact” tourism, staycations, workcations, six-feet tourism, etc. As depicted in Figure 1, there was also a positive side to the pandemic. COVID-19 provided destination planners with time and space to ponder the pre-existing unsustainable and irresponsible practices. The adoption of digital alternatives to existing practices, the evolution of new forms of tourism, and the stimulation of crisis management in strategic planning are representative of the innovations and creativity triggered by the pandemic. Thus, Ost and Saleh [26] envisaged the current crisis as an opportunity to induce more innovation and creativity in the tourism industry, which would contribute to resilience and sustainability. Other positive outcomes of the pandemic include a reduction in the carbon footprints and GHG emissions from tourism, the opportunity to participate in CSR, a halt to the pre-pandemic scenario of over-tourism, the discovery of virgin destinations, higher environmental sensitivity among tourists, a boost to domestic tourism, more responsible stakeholders, and a greater emphasis on hygiene and sanitation. However, the pandemic has provided only temporary relief from the pre-existing unsustainable practices [23,25]. In the absence of any significant strategy, unplanned promotion and marketing efforts in the post-pandemic world will again lead to unsustainable and irresponsible growth. As a result, there arises an utmost need to sustain the resilient strategies, sustainable practices, and positive outcomes witnessed by the tourism industry during the pandemic. This will contribute to the progression towards a path of sustainable growth in the post-pandemic era.

A series of challenges that the tourism industry can encounter in the post-pandemic world include the gradual recovery of tourism demand. Moreover, there is still uncertainty about tourists returning to their normal habits [9,66]. In such a situation, understanding customers’ concerns and providing personalized travel services is the need of the hour. Moreover, stimulating innovations and creativity in tourism services and the further promotion and maintenance of travel bubbles would be imperative to strive for sustainability. Other challenges comprise the fear of businesses to undertake successful planning and devising a sustainable strategy of operation. In this context, investment in R&D and digital infrastructure, framing regulations in line with the new normal, and implementing digital solutions as online alternatives to existing practices can be identified as some of the sustainable solutions. Dealing simultaneously with health and environmental challenges and realizing a climate-neutral world in the post-pandemic era are also major challenges for the potential tourism industry. In order to sustainably address these issues, the use of active transportation modes, complying with both safety and quality standards, the adoption of green practices, the conservation and rational use of resources, and inducing responsible behavior among tourists and communities are imperative. In essence, dealing with pre-pandemic issues of over-tourism and unsustainable practices is the need of the hour. Along these lines, taking advantage of available infrastructure instead of additional construction, the development of sustainable skills among employees, promoting stakeholder coordination, and imposing carrying capacity constraints can help to sustainably revive tourism in the post-pandemic world.

The present work was carried out with the main goal to review the most relevant literature produced in the last two years about the pandemic impacts and the tourism industry's sustainability and resilience in future crises. It was possible to conclude that COVID-19 brought negative but also positive effects on the tourism industry. This pandemic was a time for the industry to reset and rethink a more sustainable future by addressing the potential issues in the post-pandemic phase and identifying suitable measures to strive for sustainability. Since this is a literature synthesis of how research is centered around the outcomes of the COVID-19 crisis, the scientific implications are evident. The conceptual model developed in the present work contributes to the existing frameworks by illustrating the three phases of tourism development in the face of a pandemic and corroborating the potential challenges with suitable solutions to strive for sustainability in the post-pandemic era. On the practical side, tourism managers and destination planners have here a framework that can help them to consider these crises as an opportunity to identify sustainable practices to look forward to the future in a more enlightened and informed way, assisting in the development of more sustainable and resilient tourism businesses and destinations. In theory, this study contributes to understanding the pre-pandemic phase as a period of over-tourism and related unsustainable practices. While the pandemic created a scenario of under-tourism, it percolated significant positive impacts, sustainable practices, and responsible behavior in the tourism industry. However, in the absence of any conservative measure, these impacts are expected to be short-lived. Thus, along with the sustainable solution to identified challenges for the post-pandemic industry, it is highly crucial to sustain the positive side of the pandemic. This would lead to building a more resilient and sustainable tourism industry in the post-pandemic world.

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