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Reviving tourism industry post-COVID-19: A resilience-based framework

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ABSTRACT

The COVID-19 pandemic struck the tourism industry severely. Based on the review of 35 papers that studied the tourism industry in the wake of the pandemic, we propose a resilience-based framework for reviving the global tourism industry post-COVID-19. Our framework outlines four prominent factors for building resilience in the industry: government response, technology innovation, local belongingness, and consumer and employee confidence. We argue that using such inclusive resilience; the tourism industry may transform into a new global economic order characterized by sustainable tourism, society’s well-being, climate action, and the involvement of local communities. We also offer directions for future research in the area.

1. Introduction

The outbreak of COVID-19 has posed critical health challenges worldwide. The pandemic is one of the most highly contagious outbreaks in recent human history, with more than 46 million cases and 1.2 million deaths (as on 31st October 2020) (https://www.worldometers.info/coronavirus/). Given the high speed of transmission of the novel coronavirus (SARS-CoV-2), governments worldwide have had no other option but to impose lockdowns. The spread of the virus has severely threatened lives, and measures such as lockdowns have posed a critical risk to the masses’ livelihoods (Sharma & Mahendra, 2020). The economic shocks of the pandemic are being observed across all industries and sectors worldwide. While some industries can adapt to digital platforms and continue their struggle for survival (Mehrolia, Alagarsamy, & Solaikutty, 2020), a few industries have encountered unprecedented failures due to travel restrictions and social distancing, thereby finding it extremely difficult to survive the pandemic. Tourism is one industry that cannot hold its ground without the mobility of tourists. The fall of 22% in tourist numbers in the first quarter of 2020 (compared to the same quarter of 2019), and the threat of 60% to 80% fall throughout 2020 (compared to 2019), are some indications of the havoc that the COVID-19 pandemic can cause for the global tourism industry (World Tourism Organization, 2020). Tourism is one of the most labour-intensive sectors. Such a slowdown for the industry may put millions of jobs at risk, thereby threatening to roll back the progress made on the front of sustainable development goals (World Tourism Organization, 2020).

As indicated by Rivera (2020), examining the hospitality and tourism industries in the pandemic context is of paramount importance. Researchers have started to focus on this area, yet there is only limited work available so far. A search query on the Web of Science database yielded no more than 45 results that studied the impact of COVID-19 on the tourism industry. These studies are also observed to be all over the place, which poses a directional challenge for scholarship in the area. Such variance in studies fails to significantly enrich the body of knowledge, thereby proving to be of limited use to policymakers and practitioners.

The WHO (2017) recommends rapid reviews to provide timely evidence for policymakers to respond to the emergency. Since the COVID-19 pandemic threatens to be particularly fatal for the tourism industry, a rapid review of the available literature is highly recommended. Such a review will not merely consolidate the findings of the existing studies but also provide insights and directions for future researchers to focus on the appropriate problems plaguing the sector.

The above discussion drives our motivation to perform a review of the challenges being faced by the global tourism industry in the wake of COVID-19. The research questions for our study are set as follows:

RQ 1. To observe the impact of COVID-19 on the tourism industry by studying the emerging body of knowledge in the field;
RQ 2. To suggest a policy framework that enables market players and governments worldwide to cope with the challenges emerging for the
### Table 1
Reviewed papers.

| Study | Type of paper | Context | Source |
|-------|---------------|---------|--------|
| Assaf and Scuderi (2020) | Editorial | Role of government in reviving tourism sector | Tourism Economics |
| Basm and Hai (2020) | Conceptual | The freedom to engage in hospitality and tourism in areas of Asia, Europe, and North America has been unprecedentedly impacted during the pandemic | International Journal Of Contemporary Hospitality Management |
| Benjamin, Dillette, and Alderman (2020) | Conceptual | An actionable contribution to equity to bring about the transformation of tourism | Tourism Geographies |
| Brouder (2020) | Conceptual | Sufficient institutional progress on both the demand and supply side of tourism can facilitate the development of new routes | Tourism Geographies |
| Brouder et al. (2020) | Editorial | The response to the contemporary challenge would help the industry rebuild itself | Tourism Geographies |
| Buckley (2020) | Letter to editor | Conservation implications of COVID-19 | Biological Conservation |
| Carr (2020) | Conceptual | Indigenous informed methods will contribute significantly to the transformation of the global tourism industry | Tourism Geographies |
| Chang, McAleer, and Ramos (2020) | Editorial | The paper presents a charter for tourism, travel, and hospitality after COVID-19 as a contribution to the industry | Sustainability |
| Cheer (2020) | Conceptual | Human prosperity needs more complex collections of strategies to assess the impact of tourism on host communities | Tourism Geographies |
| Chen, Huang, and Li (2020) | Conceptual | Nine key themes were established, including the effect on tourism, people’s emotions, management of tourism and cultural venues, the position of the hospitality industry, national command and local reaction, tourism conflicts and remedies, corporate self-improvement initiatives, government assistance, and post-crisis tourism product | Current Issues in Tourism |
| Crossley (2020) | Conceptual | Ecological sadness may be compared to optimism for environmental repair | Tourism Geographies |

### Table 1 (continued)

| Study | Type of paper | Context | Source |
|-------|---------------|---------|--------|
| Everingham and Chassagne (2020) | Conceptual | Impacts of the COVID-19 coronavirus call for ground-breaking e-Tourism model for tourism. | Information Technology & Tourism |
| Gallego and Font (2020) | Empirical | In too unpredictable circumstances, Big Data offers timely granular required data for making informed decisions. | Journal of Sustainable Tourism |
| Galvani, Lew, and Perez (2020) | Conceptual | By converging economics with biology, philosophy, and neurology, sustainability targets may be incrementally attained over time. | Tourism Geographies |
| Gossling, Scott, and Hall (2020) | Conceptual | For interrelated reasons of risks incurred in global travel and the sector’s exposure to climate change, the ‘COVID19 pandemic could contribute to a crucial reconsideration of the global volume growth model for tourism.’ | Journal Of Sustainable Tourism |
| Greetz et al. (2020) | Conceptual | Impacts of the COVID-19 pandemic could contribute to a crucial reconsideration of the global volume growth model for tourism. | Tourism studies |
| Hall, Scott, and Gossling (2020) | Conceptual | The selective nature of the effects of COVID19 and the steps to control it can lead to tourism reorientation, but in others, it will contribute to policies that represent the selfish nationalism of some countries | Tourism Geographies |
| Haywood (2020) | Conceptual | Despite the debilitating effects of COVID-19, there are emerging new ways of unity that question the existing ethic of competitiveness. | Tourism Geographies |
| Higgins-Desbiolles (2020) | Conceptual | The study presents a vision focused on a community-centered tourism system that redefines and reorients tourism based on local communities’ rights and interests | Tourism Geographies |
| Iaquinto (2020) | Conceptual | The perspectives of mobility are important to understanding the effect of COVID-19 on global tourism | Dialogues In Human Geography |
| Iannidis and Gynomiou (2020) | Conceptual | The tourism industry is likely to recover from this sudden market shock mainly due to various forms of government interference | Tourism Geographies |

(continued on next page)
### Table 1 (continued)

| Study                  | Type of paper | Context                                                                 | Source                        |
|------------------------|---------------|-------------------------------------------------------------------------|-------------------------------|
| Lapointe (2020)        | Conceptual    | A connexion between tourism and the needs of the host communities       | Tourism Geographies           |
| Lev, Cheer, Haywood, Brouder, and Salazar (2020) | Comments from guest editors | The paper provides a vision of how the environment is shifting, developing, and transitioning into something new than before the global pandemic experience of 2020. | Tourism Geographies           |
| Mao, He, Morrison, and Andres Coca-Stefaniak (2020) | Empirical | Corporate social responsibility had positive impacts on employee self-efficacy, hope, resilience, and optimism through employee satisfaction with corporate COVID-19 responses | Current Issues In Tourism     |
| McCartney (2020)       | Conceptual    | The recovery wave should shift to public-private privatization and collaboration | Current Issues In Tourism     |
| Mostafanezhad, Cheer, and Sin (2020) | Conceptual | Historical geographies of ethnicity, contemporary geo-economic relations, and the broader pivot to the Asia Pacific region mediate the geopolitical anxieties of tourism | Dialogues In Human Geography |
| Nepal (2020)           | Conceptual    | In countries like Nepal, ways of doing tourism business need to move if we want to be able to survive COVID-19 in the future, like a crisis | Tourism Geographies           |
| Niewiadomski (2020)    | Conceptual    | The temporary deglobalization processes give the tourism industry an unparalleled opportunity for a reboot, an unrepeatably opportunity to redevelop in line with the values of sustainability and to remove multiple ‘dark sides’ of the growth of tourism, such as environmental degradation, economic exploitation, or overcrowding | Tourism Geographies           |
| Pridesaux, Thompson, and Pabel (2020) | Conceptual | By adopting a ‘flattening the curve’ strategy instead of flight, the success of techniques to flatten the COVID-19 curve points to the ability to combat climate change | Tourism Geographies           |
| Renaud (2020)          | Conceptual    | Concepts of global mobility and local mobility, power                    | Tourism Geographies           |
| Rivera (2020)          | Empirical     | Pandemic COVID-19 could temporarily immobilise our collective activities but will not restrict the community from validating research ideas | International Journal Of Hospitality Management |
| Romagosa (2020)        | Conceptual    | The challenge for sustainable global tourism will be to strike a balance between sustaining activity in rich countries while preventing overcrowding and taking activity to emerging countries, some of which are reliant on the sector and markets that will need a lot of incentives to recover | Tourism Geographies           |
| Rowen (2020)           | Conceptual    | Examining transformational festivals may provide theoretical tools to turn tourism into a more responsible and sustainable activity | Tourism Geographies           |
| Stankov, Filipinou, and Vujicic (2020) | Conceptual | The tourism industry has the opportunity to embrace the movement of consciousness, confidence in its ability to focus on current issues and pave a new path toward more compassionate and meaningful tourism for hosts and guests alike | Tourism Geographies           |
| Tremblay-Huet (2020)   | Conceptual    | A deeper awareness of the problems by remote communities and behaving accordingly | Tourism Geographies           |
| Trupp and Delezal (2020) | Conceptual | The article discusses the situation of the tourism sector in Southeast Asia and discusses the ties between tourism and sustainability during the pandemic times it is very feasible to reopen gradually requiring only non-negative profits, but it is considerably more | Austrian Journal of South-East Asian Studies |
| Tsionas (2020)         | Conceptual    | Tourism Economics                                                        | Tourism Economics              |

(continued on next page)
global tourism industry from the outbreak of the pandemic.

Out of the 47 papers found on the Web of Science database, we discovered that 10 do not meet the inclusion criteria (detailed in the methodology section). We rigorously reviewed 37 papers to synthesize their findings and propose a framework for further advancement of the scholarship in this area. Our results reveal that the pandemic has created severe roadblocks for the tourism industry, and the way ahead seems to be rocky. We learn that this challenge may open the doors for local tourism, eco-tourism, and sustainable tourism, which have long been part of the discussion but have failed to take any tangible shape so far. Four significant themes emerge from our work, namely, sustainable tourism, climate action, transformation to the new global economic order, and resilience. We make a significant theoretical and practical contribution to the field by suggesting a coping-up mechanism, which revolves around resilience. Our framework includes resilience from market players, governments, non-government agencies, and all other stakeholders.

The remainder of our paper is organized as follows: The next section discusses the methodology of our work, the third section presents the thematic discussion, the fourth section highlights the future research agenda, and the last section concludes by outlining the policy frame.

2. Methodology

The systematic reviewing methodology is followed in this paper. The advent of this methodology in the field of management is recent (Paul & Criado, 2020; Tranfield, Denyer, & Smart, 2003). This methodology is driven by its merits in the form of systematic, transparent, and replicable review (Cook, Greengold, Ellrodt, & Weingarten, 1997; Cook, Mulrow, & Haynes, 1997; Hao & al, 2019; Wolf, Shea, & Albarone, 2001). It is also inspired by prior review articles (Bansal, Garg, & Sharma, 2019; Dhaliwal, Singh, & Paul, 2020; Gilal, Zhang, Paul, & Gilal, 2019; Jain, Sharma, & Mahendra, 2019; Paul & Pellicano-Cestero, 2020; Paul & Mas, 2020; Rosado-Serrano, Paul, & Dikova, 2018; Talan & Sharma, 2019; Thomas & Paul, 2019).

Records were searched employing the Web of Science database. The usage of this database ensures a consistent standard for the articles. Using keywords like “COVID-19,” “tourism,” “hospitality,” and “coronavirus,” we found 47 records. Since the problem of COVID-19 pertains to 2020, the records are fewer in number. Nevertheless, given the mandate of the WHO for rapid reviews, we consider it worthwhile to conduct a review in this pivotal field. These records were then screened through titles and abstracts. It was discovered that 37 papers fell within our theme, while the remaining 10 did not. These 37 papers were selected for further analysis. These papers are shown in Table 1.

To arrive at the appropriate themes studied in the selected papers, we ran a cluster analysis on these papers’ keywords through the VOS viewer project developed by Leiden University, the Netherlands. Through this approach, we came up with four clusters, namely, sustainable tourism, climate action, transformation to the new global economic order, and resilience. We use these clusters as the themes for our work, and group the keywords of the 35 records within these themes, which drive the thematic discussion of our study. This analysis leads to the development of three clusters as detailed in Table 2.

3. Thematic discussion

Fig. 1 exhibits the prominent keywords clustered into three groups. First, the focus of research has been around the future of tourism, wherein the body of knowledge is concerned about the future of tourism sector, specifically in the context of communities and the cause of sustainability. Second, the scholarship is engaged in deliberating on the issues of resilience, mobility, degrowth, and sustainable tourism. Finally, there is an ongoing discussion around geopolitics, climate change, and transformation to the new situation through a reset of the sector. We use these keywords to draw two major themes, comprising four sub-themes, as exhibited in Fig. 2. This thematic discussion is presented below.

3.1. Resilience

The business world recognizes resilience as a crisis management tool/strategy for business stability and adaptability to all types of risks, during natural disasters and emergencies. Furthermore, business resilience is linked to the organization’s ability to adapt to the environment and new circumstances to mitigate the effects of the incident (Supardi, Kudus, Hadi, & Indonesia, 2020). Resilience strategies require coordination, various crisis management techniques, good relationships (among all stakeholders), a comprehensive network, recognition of risks and opportunities, and timely and scalable intervention (Alves, Loko, Luo, & Hao, 2020; Fitriasari, 2020). The literature on resilience identifies proactive, absorptive/adaptive, reactive, or dynamic attributes of resilience (Supardi et al., 2020).

Historically, the tourism industry has quickly bounced back after disasters, pandemics, and epidemics like Ebola, Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS). Local, regional, or national governments are aiding in the industry’s recovery by luring investors through tax breaks, lenient land-use rules, etc. (Brouder, 2020; Ioannides & Gyimothy, 2020). Before international travel can resume, domestic tourism will boost the resumption of the tourism industry in the wake of the pandemic. Other factors, including technological resilience, local belongingness, and customer and employee confidence, may help build industry resilience, which is the need of the hour.

3.1.1. Governments’ response to COVID-19: A new outlook

Businesses across industries are looking forward to “business as
usual”, and the tourism industry is no exception. All the industries are banking largely upon “government stimulus packages and interventions” to improve their productivity. For instance, TUI, the world’s most prominent multinational tourism organization, is taking the UK and German governments’ aid and has announced cost reduction in its operations across the world (Higgins-Desbiolles, 2020). The government has become a significant role player in the economy of tourism (Table 3). This has resulted in the re-nationalization of airlines, tourism firms, and networks like airports. This is something different in comparison to earlier crises, which created curiosity in research and institutions and had no “policy impact,” particularly in the tourism industry (Hall et al., 2020). Tsionas (2020) discusses post-COVID-19 problems and mentions that “opening at limited capacity” of almost 33% is a good option. He proposes that government subsidies would be needed to support such lower capacities. There has been massive government intervention in the working and operation of the tourism industry during the COVID-19 crisis (Higgins-Desbiolles, 2020). Discussing Macao’s reaction to the pandemic in a “3-wave analogy,” McCartney (2020) observes that the wave of recovery will push toward “public-private partnership and cooperation.” In future, the effect of such governmental response on tourism will create a novel outlook.

### 3.1.2. Technology innovation

Technology is a major force in creating flexibility in the tourism industry (Hall et al., 2020). Disasters help in speeding up changes in technology. During COVID-19, people have taken massive aid from technology experts. There are instances of robots replacing people, applications on mobiles being employed to track people’s contacts, or Big Data analytics forecasting COVID-19 spread among the masses. Robot, automation technologies, and artificial intelligence can reduce cost, improve liquidity, and enhance flexibility. This will also help maintain social distancing (Assaf & Scuderi, 2020; Thomas & Chopra, 2020), as technology can connect people without any physical contact. Thus, technology can handle pandemic-specific problems such as screening travellers, discovering COVID-19 cases and tracking contacts, ensuring online education for students, etc. (Hall et al., 2020). Many reports show a surge in the public’s trust in technology, their readiness to connect, and their willingness to change their attitudes toward technology. People have now started ignoring privacy issues to get a more significant technology benefit (Stankov et al., 2020). Gretzel et al. (2020) has presented the “six transformative e-tourism research pillars” for bringing in changes in e-tourism by proactively using IT resources for short-term and long-term purposes.

### 3.1.3. Local belongingness

The global aspect seems broken that calls for local belongingness to come to the rescue (Brouder et al., 2020; Chang et al., 2020). During the pandemic and post-COVID-19, domestic tourism is poised to dominate the scene with most travellers coming from nearby areas (Haywood, 2020). In many places, domestic travel is limited to visiting friends and relatives, but this will expand to leisure tourism soon. International travel will gradually revive when the borders open and international flights are permitted to operate without any hindrances (Baum & Hai, 2020). Many countries and regions have restricted movements by imposing bans and other stringent requirements on entry and exit, which has subtly impacted the global tourism industry. According to Higgins-Desbiolles (2020) and Baum and Hai (2020), the right to travel or enjoy gainful employment in the hospitality and tourism industry will not be allowed in the near-immediate future. “Tourism bubbles,” or local links built during the disaster, will act as a flexible plan. Future travel will depend on combined self-care, such as the suggestion to open the Trans-Tasman bubble between Australia and New Zealand (Carr, 2020), or the potential fast-tracking of immigration clearance between the Republic of Korea and China (Mostafanezhad et al., 2020). The feeling of belongingness among locals will dictate terms for the revival of the tourism industry.

### 3.1.4. Consumer and employee confidence

It is essential to gain consumer confidence to restart the halted industry of tourism. Learning from disaster planning and fighting the drive to turn away from failures experienced in the future are the critical pathways to be followed (Rivera, 2020). The revival of the tourism industry...
industry will depend on boosting confidence in travelling and lessening the perception of risk involved (Assaf & Scuderi, 2020). The impact of COVID-19 influences consumers’ perception of tourism product and services (Yu et al., 2020). Mao et al. (2020) focuses on human capital and gaining employee confidence.

3.2. Transformation to the new global economic order

Transformations like restarting, reorganizing, and assimilating the tourism industry according to the latest standards and rules are required to revive the industry (Lew et al., 2020). The renewal will be impacted by the government’s response to climate change and the need for a carbon-free economy. After the pandemic, the global economic and political systems will encompass changing patterns concerning climate change mitigation, sustainable tourism, local communities, and society’s well-being.

3.2.1. Sustainable tourism

The present times are the most appropriate to promote a sustainable and equitable tourism industry (Benjamin et al., 2020). As per Carr (2020), original cultural sites suggest happiness, physical condition, environmental responsibility, and conventional ecological information. Such sites form the future of “cultural sustainability” and it is essential to manage these prudently for the development of the economy. In the aftermath of COVID-19, the tourism industry is bound to be reorganized based on actual planning and not just paperwork. The industry needs to be oriented toward education, environmental and social justice, and racial healing. There is a need for wary people (For instance, tourists, local communities, SMEs, Government) to take advantage of the present grave situation as it will allow more tourist experiences. The industry’s service providers need to be encouraged to push a new demand by changing their unsustainable product offers. Such measures can connect, support, and take care of the whole tourism industry to everyone’s advantage (Stankov et al., 2020). The market players should also confront the means and systems that will prevent and transform harmful and weak tourism (Higgins-Desbiolles, 2020). There is an essential requirement for a charter for setting up a stable and sustainable tourism industry. There is a disconnect between what UNWTO (World Tourism Organization) is preaching (sustainability) and what is exercising (growth expansion). These disconnects need to be understood and repaired before considering tourism’s future (Brouder et al., 2020; Nepal, 2020). The ongoing impermanent process of deglobalization has presented the tourism industry with a unique opportunity to recreate sustainability by leaving aside the “dark sides” of recent years, such as environmental deprivation, economic abuse, or congestion (Niewiadomski, 2020). Sustainability is a continuous procedure to attain positive outcomes and is defined by changing beliefs, wishes, information, skills, and public awareness (Galvani et al., 2020). Expert knowledge and experience (Chang et al., 2020; Prideaux et al., 2020) need to be put into practice for shifting toward sustainable tourism.
3.2.2. Well-being of society

The South American concept *Buen Vivir* was examined by Everingham and Chassagne (2020). This is a non-Western alternative to neoliberal capitalism for moving tourism priorities from economic growth to the welfare of, and meaningful connections in, the society at large and covering the ecological balance. The impact of COVID-19 is such that how people live and travel has changed completely. Preferences are now shifting toward connecting and shopping locally. The virus has offered an opportunity to the tourism industry to recreate and contribute to society’s welfare (Benjamin et al., 2020; Rowen, 2020). Life, health, environment, etc., are the focused areas during disasters. According to Benjamin et al. (2020), it is essential to select a program that encourages sustainable and equitable development where people can acknowledge the planet and shift their current unsustainable views on tourism. In addition, Benjamin et al. (2020) point out that the change should concentrate on equity. This will necessitate positive and slow changes relating to systems’ interconnectedness, where economic growth is not considered a default parameter of social and ecological well-being (Cheer, 2020). The scholarship in the field of tourism needs to acknowledge tourism as an industry with a focus on societal well-being (Benjamin et al., 2020).

3.2.3. Climate action

The pandemic’s effect is worsening due to global climate changes (Sharma et al., 2020; Sharma & Mahendru, 2020; Sharma, Talan, Sri-vastava, Yadav, & Chopra, 2020). Crossley (2020) studies the connection between pandemic and climate change and explores how the damage done to the environment can be repaired and can be attached to ecological grief. Emotional dynamics can further help understand tourists’ behavior, covering the constant “attitude-behavior” gap concerning sustainable tourism. COVID-19 offers an opportunity to tackle the impact of climate change by shifting from the present model of “high resource consumption” to one that is “environmentally friendly” (Gössl et al., 2020; Prideaux et al., 2020).

3.2.4. Local communities – the centres of transformation.

Local communities are the centres of transformation for the tourism industry during this pandemic. There may be future disagreements in local areas as tourists take the help of these local communities and governments for their business. Changes being considered by tourist destinations relating to modifications in a carbon-free economy are significant (Rideau et al., 2020). Changes at the local level may help restore neocolonial and neoliberal biases (Everingham & Chassagne, 2020; Renaud, 2020; Tremblay-Huet, 2020).

Since the tourism industry has come to a halt and social distancing acts are relevant, even small-scale local-level activity is considered harmful. People have to think about the local community at large (Lapointe, 2020). According to Renaud (2020), the industry of cruise tourism should approve a “local mobility” model, which means that large cruise ships will be forbidden, but a fleet of smaller ships will be allowed. During the pandemic, social unity, self-sacrifice, and a sympathetic attitude are as significant as wearing a face mask to protect oneself and others. Post-COVID-19 times will allow service providers to rethink and reset the tourism industry for the future. There is a need for a “community-centered tourism framework” with responsible approaches to reset, redescribe, and refamiliarize the tourism industry in the interest of local communities. A deeper understanding of remote communities’ challenges and acts may help transform the sector (Tremblay-Huet, 2020). Some research studies consider these times as a defining moment for resetting the industry of tourism (Higgins-Desbiolles, 2020). Developed countries are considering domestic or “proximity tourism” based on local thought and local acting theory.

4. A resilience-based framework for the new global economic order

Based on literature review, we propose a resilience-based framework for the new global economic order (Fig. 3). This framework stems from the challenges posed by COVID-19 and the containment measures (such as lockdown) to the global tourism industry. The advisories issued to the tourists by various governments have further added fuel to the fire, resulting in the decline of revenues (World Tourism Organization, 2020). The tourism industry seems to have moved from “over-tourism”...
to “non-tourism” at once (Gössling et al., 2020). The increasing unemployment in other sectors of the global economy will also reflect in the number of tourist visits in the coming years. Segments of the tourism industry, including airlines, hospitality, sports events, restaurants, and cruises, are bound to be hammered by the pandemic. The proposed resilience-based framework can help transform the industry both during and after COVID-19.

Organizational studies are focusing on sustainable change and resilience to recovery with the deployment of adaptive capabilities by providing insights into recovery responses. Crises and emergencies such as COVID-19 also extend to global visibility and understanding. This pandemic will contribute to creating new business models, which will essentially determine the industry’s chances of survival by transforming it into a much more sustainable form. The tourism industry needs to demonstrate resilience from several sides. We broadly propose that three segments, namely, governments, market players, and local communities, need to get their act together to lend resilience to the industry. Technological innovations need to rise to a higher level for speeding up creations in tourism and hospitality. Artificial intelligence (AI), the Internet of things (IoT), and technologies relating to location, navigation, drones, and robotics, are a few areas that need enhancements. This can promote flexible thinking within the tourism industry. This pandemic has compelled industry leaders to explore and analyze other better-suited technologies to reboot the industry and regain consumer confidence. Existing literature notes that the tourism industry has previously been quick to bounce back from the shocks of epidemics, pandemics, and global crises. However, governments realize that the shock of COVID-19 is unique since it is not possible to market the unsold capacity in coming years, causing a permanent setback for the industry. Governments should strive to build an atmosphere in which they attract investors through a variety of opportunities in the prevalent spirit of neoliberalism, such as offering tax breaks, relaxing strict land-use laws, etc. (Brouder, 2020). Governments may promote the local embeddedness of tourism businesses to improve the element of belongingness. Supporting these arguments, Di Domenico, Haugh, and Tracey (2010) observe that local economies react to crises by working together and through social work, and Johannisson and Olaison (2007) note that rural firms have better prospects of recovery than their urban counterparts. Henceforth, the support from the government, coupled with local belongingness, may pave the way for the transformation of the tourism industry. The challenge is different for large-scale multinational players in the industry, focusing on local supply chains to minimize the costs. They may need to review their activities and rely on narrower and sub-national supply chains. This may include sourcing more resources locally, be it food, raw materials, service providers, or the composition of the workforce. Post-pandemic times may entail a long-term decrease in the appeal of certain growth spots now deemed too risky. Such a situation may augur well for less popular, less populated regions by providing them the opportunity to improve their appeal as potential tourism destinations.

Resilience from all sides of the value-chain may transform the tourism industry into the new global economic order characterized by sustainable tourism, climate action, societal well-being, and involvement of local communities. Studies have observed that the tourism industry indirectly contributes to pandemics in multiple ways, including food wastages leading to industrialized food production (Hall & Gössling, 2013), human interference with wildlife and deforestation (Barlow et al., 2016; Lade et al., 2020), and climate change conditions (Scott, Hall, & Gössling, 2019). The lockdown in many countries and the adoption of significant restrictions on borders has also drastically affected the tourism economy worldwide. The movement from “over-tourism” to “under-tourism” is bound to reverse the scene of climate change to a large extent (Hall & Gössling, 2013). COVID-19 is leading to some positive outcomes for the tourism industry. Declined demand in the aviation industry is already causing airlines to phase out outdated aircraft. Restrictions on overseas travel for international students, business travellers, political leaders, etc., are leading to increased leverage from video-conferencing (Banister & Stead, 2004; Cohen, Hanna, & Gössling, 2018). These changes are bound to reorient the global tourism industry in a “sustainable” way, which focuses more on inclusive development, rather than the abstract notion of “growth.” Carbon footprint reductions may gain more traction worldwide, as is already seen across main tourist destinations. Similarly, the mobility of visitors could transform significantly, not only in the immediate future but over a long period. The relentless neophilia and the disturbing desire for (often irresponsible) exploration in distant places may be replaced by recreation and travel much closer to home.

5. Future research agenda

COVID-19 has triggered unprecedented casualties for mankind in life-changing circumstances. The shock and effect of this pandemic are so strong that research work across all fields is subject to pre-COVID-19 and post-COVID-19 classifications. The post-COVID-19 research is bound to be characterized by economic, environmental, and social setbacks, and the policy suggestions to counter those. Given the tourism industry’s sensitivity to this pandemic situation, the body of knowledge in the field of tourism needs some quick and sound work to prepare for the future. Following most downloaded review articles (Dhaliwal et al., 2020; Paul & Benito, 2018), we provide directions for future research in
Tourism and technology
1. How can e-tourism be used to: (a) better forecast markets, model scenarios, and understand risks using innovative business intelligence solutions for destinations and tourism providers; (b) cater to changes in consumer behavior and likely interaction mode (Gretzel et al., 2020)?

Table 4
Themes and research questions for future scholarship in tourism and COVID-19.

| Theme                                      | Research Question                                                                 |
|--------------------------------------------|-----------------------------------------------------------------------------------|
| Impact of the pandemic on tourism sector   | 1. What has been the magnitude of the loss for various stakeholders in the tourism industry so far in terms of economy, employment, trust, etc.? 2. In the tourism industry, which geographical areas have been affected the most due to this pandemic? Which players were able to mitigate the crisis? Which strategies did they employ? 3. Does the worst seem to be over or is it yet to come for the tourism industry? |
| Post-pandemic recovery of the sector       | 1. It is anticipated that domestic demand will fuel the recovery of the tourism industry post-COVID-19 (Assaf & Scuderi, 2020). How far can this anticipation be validated? 2. What measures should be taken by governments across the globe for transforming the tourism industry in the post-crisis scenario? |
| Resilience and sustainability of the tourism sector | 1. Which factors can contribute to making the tourism industry resilient enough to bounce back in the post-COVID-19 times? 2. How can the tourism industry use this crisis as an opportunity to take a more sustainable form (Haywood, 2020; Higgins-Desbiolles, 2020; Ioannides & Gyiomyth, 2020)? |
| Tourism and technology                     | 1. How can e-tourism be used to: (a) better forecast markets, model scenarios, and understand risks using innovative business intelligence solutions for destinations and tourism providers; (b) cater to changes in consumer behavior and likely interaction mode (Gretzel et al., 2020)? |

6. Conclusion

The tourism industry was seen as a major cause and carrier of the novel coronavirus that triggered the outbreak of COVID-19. The unsustainable practices of the industry didn’t help the cause of sustainable living worldwide. The pandemic has nearly brought the global tourism industry to a halt. All stakeholders in the industry must work together to make the industry sufficiently resilient to deal with the crisis. Based on the studies conducted to understand the tourism industry in the context of COVID-19, we propose a resilience-based framework for the industry. Through our framework, we argue that with the help of the resilient approach from governments, market players, technology innovators, and the workforce employed in the industry, the tourism sector may end up evolving in a much more sustainable way post-pandemic. The involvement of local communities is going to be immensely critical in this journey, as the restrictions on international travel may stay longer than anticipated. Such developments would widen not only the base of the tourism industry but also present opportunities for less-developed tourism spots to grow further. Large-scale tourism players would need a reboot to survive in post-pandemic times. Still, acting in line with our resilience-based framework, small-scale players certainly can emerge victorious and ensure the well-being of the society at large while also facilitating sustainable tourism.

Declaration of Competing Interest

The authors declare that there is no conflict of interest.

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References

Alves, J. C., Lok, T. C., Luo, Y., & Hao, W. (2020). Crisis Management for Small Business during the COVID-19 outbreak: Survival, resilience and renewal strategies of firms in Macau (pp. 1–29). Research Square. https://doi.org/10.21203/rs.3.rs-43454/v1. PREPRINT (June).
Assaf, A., & Scuderi, R. (2020). COVID-19 and the recovery of the tourism industry. Tourism Economics. https://doi.org/10.1080/13548166.2020.1769572.
Banister, D., & Stead, D. (2004). Impact of information and communications technology on transport. Transport Reviews. https://doi.org/10.1080/0144164042000206060.
Bansal, S., Garg, I., & Sharma, G. D. (2019). Social entrepreneurship as a path for social change and driver of sustainable development: A systematic review and research agenda. Sustainability (Switzerland), 11(4), 1091. https://doi.org/10.3390/su11041091.
Barlow, J., Lennox, G. D., Ferreirra, J., Berengere, E., Lees, A. C., Nally, R. M., Gardiner, T. A. (2016). Anthropogenic disturbance in tropical forests can double biodiversity loss from deforestation. Nature, 535(7610), 144–147. https://doi.org/10.1038/nature18326.
Baum, T., & Hai, N. T. T. (2020). Hospitality, tourism, human rights and the impact of COVID-19. International Journal of Contemporary Hospitality Management, 32(7), 2397–2407. https://doi.org/10.1108/IJCHM-03-2020-0242.
Benjamin, S., Dillette, A., & Alderman, D. H. (2020). “We can’t return to normal”: Committing to tourism equity in the post-pandemic age. Tourism Geographies. http://doi.org/10.1080/14616688.2020.1791190.
Brouder, P. (2020). Reset redux: Possible evolutionary pathways towards the transformation of tourism in a COVID-19 world. Tourism Geographies. https://doi.org/10.1080/14616688.2020.1796528.
Brouder, P., Teoh, S., Salazar, N. B., Mostafanezhad, M., Pung, J. M., Lapointe, D., … Clausen, H. B. (2020). Reflections and discussions: Tourism matters in the new normal post COVID-19. Tourism Geographies. https://doi.org/10.1080/14616688.2020.1770352.
Buckley, R. (2020). Conservation implications of COVID19: Effects via tourism and extractive industries. Biological Conservation, 247. https://doi.org/10.1016/j.biocon.2020.108640.
Carr, A. (2020). COVID-19, indigenous peoples and tourism: A view from New Zealand. Tourism Geographies, 0(0), 1–12. https://doi.org/10.1080/14616688.2020.1768433.
Chang, C. L., McAleer, M., & Ramos, V. (2020). A charter for sustainable tourism after COVID-19. Sustainability (Switzerland), 12(9), https://doi.org/10.3390/su12093671.
Cheer, J. M. (2020). Human flourishing, tourism transformation and COVID-19: A conceptual touchstone. Tourism Geographies, 1–11. https://doi.org/10.1080/14616688.2020.1765016.
Chen, H., Huang, X., & Li, Z. (2020). A content analysis of Chinese news coverage on COVID-19 and tourism. Current Issues in Tourism, 1–8. https://doi.org/10.1080/13683500.2020.1763269.
Cohen, S. A., Hanna, P., & Gossling, S. (2018). The dark side of business travel: A media comments analysis. Transportation Research Part D: Transport and Environment. https://doi.org/10.1016/j.trd.2017.01.004.
World Health Organization. (2017). *Rapid reviews to strengthen health policy and systems: A practical guide*. World Health Organization. https://doi.org/10.1111/j.1365-2966.2008.12859.x.

World Tourism Organization. (2020). International tourism numbers could fall 60–80% in 2020 [Press Release – 7 May 2020]. Retrieved July 22, 2020, from https://www.unwto.org/news/covid-19-international-tourist-numbers-could-fall-60-80-in-2020.

Yu, F., Da, L., Ojcius, D. M., Pan, C., & Jiang, S. (2020). Measures for diagnosing and treating infections by a novel coronavirus responsible for a pneumonia outbreak originating in Wuhan, China. *Microbes Infect*, 22(2), 74–79. https://doi.org/10.1016/j.micinf.2020.01.003.

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