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Viewpoint paper

Tourism technology optimism in challenging times: Harsh lessons

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ABSTRACT

Despite the harshness of the COVID-19 crisis the concept of technology optimism has also emerged. This fosters a sense of optimism for the future, based on the implicit assumption that involving technology will almost always result in positive outcomes; in other words, technology is associated with success. In particular, the surprisingly active response of the global tourism industry to the Russia–Ukraine war since 2022 could also be attributed to an elevated level of technology optimism. Thus, this viewpoint investigates the ramifications of technology optimism in the context of the ongoing global tourism crises. This viewpoint paper is based on a general review of academic literature and online resources regarding the examples that could be attributed to technology optimism, during the ongoing COVID-19 and Russia–Ukraine war since 2022. Even though the roots of an unexpected active response of the tourism industry during the Russia–Ukraine war since 2022 are diverse, we trace it to the phenomenon of technology optimism, which has been bolstered by the current COVID-19 pandemic, and we believe it has significant implications for the tourism industry's resilience. To this end, this viewpoint paper tackles the idea that relying on technology could enhance creative solutions, build confidence and promote activism of the tourism industry in times of crisis. Additionally, we explore the idea that a shorter recovery period is possible in the case of a technology-intensive and hyperconnected tourism industry. Despite its enormous implications for the engagement of all stakeholders, technology optimism has been generally overlooked by crisis management in the tourism domain. This is the first research to propose technology optimism as an important element of tourism crisis management. By proposing these perspectives for further academic discussion at this critical juncture, we contribute to an optimistic discourse about future tourism development in challenging times.

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INTRODUCTION

In several industries, including tourism and hospitality, information and communication technology (ICT) has become a vital instrument for crisis management (Bulchand-Gidumal, 2022; Liu *et al.*, 2015; Wilk-Jakubowski *et al.*, 2022). In this context, ICT is not considered solely as a tactical tool, but also it serves as a strategic one. It is currently a critical component of all phases of tourism crisis management, as it is used to forecast (before), save or mitigate (during), and assist in recovery (after) (Dragović *et al.*, 2019; Wut *et al.*, 2021). Virtualization technologies applied to tourism have also been used to monitor, educate, and prepare mitigation strategies in the face of global climate change, even including tourists as citizen scientists to increase participation and adaptation (Harrison and Hansen, 2020). Apart from the anticipated use of ICT solutions in crisis management scenarios (Kwok *et al.*, 2021), smart environments and the ubiquitous presence of technology enable unique, unscripted, and creative applications (Gretzel et al., 2020). Except for vaccine development and medicine, the COVID-19 pandemic has revealed numerous exciting technology solutions in the fields of robotics,

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the Internet of Things (IoT), and artificial intelligence, but also in consumer electronics and everyday Internet apps that are geared toward actively addressing newly emerging challenges (Thomas *et al.*, 2021). As a result, the tourism industry and society as a whole, have gained confidence and optimism in their ability to deal with future crises through increased dependence on modern and sophisticated technology solutions (Berawi, 2021).

From a theoretical standpoint, an optimistic approach to post-COVID recovery is largely predicated on the previously identified phenomenon of technology effect (Clark et al., 2016). This phenomenon implies that continuous exposure to technical breakthroughs would drive decision-makers to be overconfident in technology's ability to produce favorable outcomes, as that confidence builds an unconscious link between technology and success (Clark et al., 2016). Indeed, the implicit assumption that the technological innovations of Tourism 4.0 work better for tourists has already become commonplace in the tourism domain (Stankov and Gretzel, 2020). In essence, the technology effect has the concept of over-optimism at its core, and as such it could be viewed as a bias toward optimism in technology (Clark *et al.*, 2016). The traditional concept of technology optimism is fueled by the fact that technological successes often come with game-changing results, such as revolutionizing industries, boosting sustainability, and improving the quality of life of many (Paro *et al.*, 2021). Such events are highly notable (Tversky and Kahneman, 1974), while on the other side, technology failures often go quietly, as they seldom change the status quo, and affect few (Case, 2015; Clark *et al.*, 2016).

It must be noted that technology optimism has downsides of its own. For example, it could be problematic if technology optimism was viewed as a doctrine stating that the increasing number of technological advancements will sustain life as the human population grows. Several critical issues emerge in this case, including the rising cost of pollution (Basiago, 1994), and the greenwashing of tech billionaires who contribute significantly to pollution (Bove, 2021). Thus, there is always a lingering question about the true purpose of technology employment or the manner in which technology is provided (Gonella *et al.*, 2019). These issues and concerns continue to be critical even in the context of crisis management. This is particularly significant in the case of tourism technology optimism, which must always be viewed through a broader socio-economic lens (Røpke, 1997). Still, from a broader perspective, this socially-responsible role during the crisis could further help in creating an image of tourism technology as a more human-centered one (Griffy-Brown *et al.*, 2018; Stankov and Gretzel, 2021).

With the outburst of the Russia–Ukraine war since 2022 (Sheather, 2022), high hopes were put on the technological supremacy and domination of the West in handling the situation (Foggin and Li, 2022). What came as a surprise is the highly elevated activism of both tourists and the travel and tourism industry. Travel companies offered free or discounted transportation for the refugees, as well as hotels to house them. However, the technologically advanced tourism supply chain and technologically savvy consumers have also rapidly depleted their own resources and innovative ideas, sometimes working together (May, 2022; Otis, 2022). In essence, backed by the power of the technological foundation of the modern tourism industry (Mandal, 2019), travel supply chains (mostly airlines and global distribution systems) have started to limit or withdraw their services aiming to help in addressing the crisis, while a globalized tourism community started to actively participate in mitigating crisis by providing ad-hoc programs to help the people in danger.

In contrast to previous cases, the tourism officials have not immediately started to lament their own fate, reminded of the damage already done by the COVID-19 (although voices of the possible negative effect of the Russia–Ukraine war of 2022 on the summer season in Europe have started to appear with the following course of development) (Baskas, 2022). Even though the roots of that surprising response of the tourism industry could be initiated from wider and more complex socio-cultural, historical, and political realms (Hunter, 2022; Sarty, 2021), we believe it could be traced in the phenomenon of technology optimism, boosted by consequences of the COVID-19 pandemic (Abed, 2021) and that holds a significant ramification for the question of resilience of the tourism industry (Sharma *et al.*, 2021). Here, resilience is seen as an ability of tourism firms and organizations to absorb and adapt to disruptions, articulated through absorptive and adaptive resilience paths (Conz & Magnani, 2020) . Thus, by building on the premises of technology optimism, this commentary tackles the idea that a strong influx of technology in tourism could encourage creative solutions, confidence, and activism of the tourism industry in times of crisis. Consequently, a shorter recovery period could be expected in the case of the technology-intensive and hyper-connected tourism industry. By proposing these perspectives for further academic discussion, at a sensitive time, we also sought to contribute to an optimistic discourse about the future of tourism as a rapidly adapting industry in these challenging times.

The authors employed a narrative literature review approach to assess and synthesize a broad range of early studies related to tourism industry responses to COVID-19 and the Russia–Ukraine war since 2022, as well as corresponding tourism market reactions

Building technology-assisted resilience during COVID-19

It is well established from tourism theory and practice in relation to numerous types of crises that the tourism industry is a delicate flower (Clements and Georgiou, 1998). The recent COVID-19 crisis again demonstrated how destabilizing an abrupt drop in demand or the loss of traditional markets can be to the global tourism industry. While the majority of countries exercised caution to protect public health at the expense of profit, certain Mediterranean countries lacked this luxury and had to open their borders. While predictions on how quickly tourism would recover were different, the following course of events showed it will be quicker than initially anticipated (Carville, 2021; Morar *et al.*, 2022; Ongsakul *et al.*, 2022). The gravity of the initial situation has also initiated innovative approaches that have nurtured alternative approaches to flourish (Stankov *et al.*, 2020). At the same time, there were a few bolder examples that have also relied more heavily on technology optimism. For example, Dubai has served as a beacon of a different approach, by proactively applying new safety regulations and the latest technological solutions in sanitation and visitor management. The efforts helped the city bounce back relatively quick and even to successfully organize of the biggest world event since the pandemic - Dubai EXPO (Elbahrawy, 2022; Kenny and Dutt, 2022). On the other hand, the COVID-19 demonstrates a relatively strong consumer desire to travel, despite certain risks (Neuburger and Egger, 2021), displaying the widely recognized importance of tourism in contemporary societies.

In essence, the plethora of solutions is now at the disposal of tourism managers for the recovering business is more feasible with technology, thus justifying technology optimism. For example, using digital channels for approaching and engaging consumer niches who are willing to participate in tourism even with some risk. Furthermore, more innovative solutions could keep the game business going even without the need for physical travels (virtual tours, phygital social media campaigns, online support, self-improvement, preparatory initiatives, etc.) and have been already mushroomed during the pandemic (Leung *et al.*, 2022; Lu *et al.*, 2022). These approaches can also be adapted to respond to the various emergent crises associated with climate change, that will already dramatically altering tourist landscapes and providing a new set of challenges that will benefit from technology optimism.

Reflections from the Russia–Ukraine war since 2022

The COVID-19 crisis has also demonstrated numerous instances of advanced or low-tech solutions being combined in novel ways to combat crises, leveraging human inventiveness and technological progress (Ardito *et al.*, 2021). For example, consumer drones were used for disinfection while delivery robots served meals or cleaned hotel rooms in China. On a larger scale, smartphones, as a ubiquitous technology, coupled with smart services were used to inform, control, track or analyze people trajectories and contacts as part of anti-COVID-19 measures (Radojević *et al.*, 2020).

However, the optimistic view on tourism recovery (Stankov and Filimonau, 2021) has been suddenly threatened by the recent outburst of the Russia–Ukraine war in February 2022. As already noted, instead of whining and lamenting on the dark future scenarios, the tourism sector has got together to and actively helped endangered people. Solidarity of Western countries (often absent from previous crises that involved active military operations) has emerged from the tourism domain as well. Solidarity in tourism now has effective digital tools and systems to quickly organize, raise awareness and, if necessary, create ad-hoc measures that will actively involve tourism in attenuating crises (Dolnicar and McCabe, 2022; Cheng, 2022). For example, *Airbnb* has provided the most comprehensive program for helping refugees in finding shelters. In February 2022, *Airbnb* reached its goal of facilitating stays for 20,000 Afghan refugee guests, and during the Russia–Ukraine war, they have committed to hosting up to 100.000 refugees (Airbnb, 2022). On the other hand, a grass-root social-media campaign had urged *Airbnb* users to start booking accommodation without the intent to actually show up at sites, as a way to financially support Ukraine *Airbnb* hosts (Otis, 2022). Similarly, global talent mobility platform *Topia* has decided to provide guidance to non-customers when it comes to relocating to new countries, offering free in-depth city guides, detailing the cost of living or how the transport system works in order to help refugees settle into new locations (Parsons et al., 2022).

Although there are few formal proofs of the effectiveness of these actions, they could serve as examples in the ongoing crisis of the digital supply chain

ability in tourism to quickly adapt and reorient, giving this industry a new role that shifts it from a passive observer to a more active participant during a crisis. By learning from the Ukrainian example, other tourism sharing economy platforms could find ideas to engage their offerings in similar situations, therefore reinforming themself as valuable members of the countries' economic systems.

Concluding remarks

This commentary was intended to provide an optimistic outlook on the future development of global tourism, which is currently afflicted by several crises but is still showing signs of strength given the extensive use of technology. Rather than accepting the role of victim in an endless cycle of crisis, the advancement of technology in tourism has endowed the industry with a "superpower", the ability to act as a crusader, assisting and nurturing those in need and miraculously recovering from (human, economic and physical) injuries and (social and cultural) traumas. This reinforces the view that tourism as an industry could evolve away from traditional crisis management concepts based on resilience, which imply methods for adapting to change in order to reestablish equilibrium (Cretney, 2014). Here, we advocate for the tourism industry to take a more proactive role in both natural and social crises, involving all parties and promoting more humanistic management (Della Lucia *et al.*, 2021; Stankov *et al.*, 2022) and the unique perks of tourism on people's lives, economic development, and human progress.

Even from an optimistic perspective, the negative impacts of ICT use in tourism, such as reduced human interaction, increased security and privacy risks, and the digital divide, cannot be ignored. These challenges represent significant obstacles that must be carefully addressed and ultimately transcended to ensure the sustainable and inclusive growth of the tourism sector.

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