

Exploring the Sustainability in a Rural Area of the World Heritage City of Yazd During the COVID-19 Pandemic: The Example of a Survived Eco-lodge's Innovations

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This paper aimed to assess a surviving eco-lodge with private ownership in Yazd Province, Iran, from a sustainability perspective. After unexpected circumstances caused by the COVID-19 pandemic, the eco-lodge has adopted innovations that could apply to similar cases. For data collection, the eco-lodge owner contributed to researchers by providing necessary information regarding his activities. Moreover, a semi-structured interview with the owner was conducted. The studied eco-lodge is an old mansion on the outskirts of the Historic City of Yazd, the first inscribed city of Iran on UNESCO's World Heritage list. At first, this old mansion was adaptively reused for accommodation purposes to familiarise tourists with the local lifestyle in 2016. Traditional architecture techniques, materials, and minimum intervention on the layout have been implemented in the adaption process. This eco-lodge has prepared financial support for locals by hiring women and youth. On the other hand, it has introduced rural areas as a prominent destination. According to the findings, a set of innovations in line with sustainability principles, such as collaborating with local entrepreneurship, advertising the sale of local handicraft products on its social media, holding creative events for children, and cooperating with universities and NGOs, helped the eco-lodge to survive during the COVID-19 pandemic.

Keywords: sustainability, eco-lodge, COVID-19, innovation, Historic City of Yazd, Iran



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Introduction

With the beginning of the COVID-19 pandemic, the world faced an unexpected and unprecedented global health, social and economic emergency. The travel and

tourism industry was especially affected as one of the first sectors with travel restrictions in almost all countries worldwide (World Tourism Organization, 2020). However, eco-tourism had a small share of the global

tourism sector, worth around USD 100 billion annually before the COVID-19 pandemic, but was experiencing fast growth (World Tourism Organization & United Nations Development Programme, 2017). Due to the fall of occupancy rates in 2020 and 2021 (World Tourism Organization, n.d.), eco-lodge facilities suffered financial losses like other parts of the tourist accommodation industry. Nevertheless, the COVID-19 crisis paved the way for innovation and had a positive impact through various unexploited opportunities (Choudhary, 2020). Innovation is the main engine for economic growth (Schumpeter, 1934). The international tourism industry also benefits from innovation, which helps to make it more competitive and advance its quality and reputation (Attia et al., 2019; Bardolet & Sheldon, 2008). Innovations, even on a small scale, can make a substantial difference in tourism development in developing countries (Batala et al., 2019). Aside from financial support, innovation is crucial to business survival (Cefis et al., 2020). Offering alternative tourism, such as eco-tourism, is one of the main contributions of Innovation (Carlisle et al., 2013). The eco-lodge is a nature-dependent tourist that adheres to the philosophy and principles of eco-tourism (Russell et al., 1995). According to Mehta et al. (2002), 'an eco-lodge is a 5 to 75-room low-impact, nature-based, financially sustainable accommodation facility that helps protect sensitive neighbouring areas; involves and helps benefit local communities; offers tourists an interpretative and participatory experience; provides a spiritual communion with nature and culture; and is planned, designed, constructed and operates in an environmentally and socially sensitive manner.' These features are consistent with sustainable tourism's environmental, economic, and socio-cultural aspects (Hagberg, 2011).

Since 2015, with the planning process for inscribing the historic city of Yazd to UNESCO's World Heritage List, the government has facilitated private-sector investment for establishing tourism businesses. After the inscription of the Historic City of Yazd in 2017, a wave of the establishment of tourist resorts, especially eco-lodges, began. About three years later, facing the restrictions caused by COVID-19, most tourism facilities were bankrupt due to the lack of efficient govern-

ment support (Mehr News Agency, 2021). This study aims to introduce sustainable-oriented innovations applied by an eco-lodge in a World Heritage area in Iran and to evaluate their effects on its survival amid the pandemic. Although the introduced innovations in the study may not be novel and leading approaches in the tourism industry, reviewing them will provide empirical insight for eco-lodges, especially in less developed destinations, to survive a health crisis.

Literature Review

Sustainable Tourism

The concept of sustainability has been increasingly highlighted in international tourism literature since the mid-1980s (Butowski, 2012). 1995, tourism became decisively linked with sustainability at the World Conference on 'Sustainable Tourism: Towards a New Tourism Culture' in Lanzarote, Spain (Azcárate et al., 2019). Despite various definitions for sustainable tourism, United Nations Environment Programme and World Tourism Organization (2005) defined it as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities." According to this definition, sustainability principles in tourism refer to consisting of environmental, economic, and socio-cultural aspects through achieving a state of balance between them (Butowski, 2012). The environmental standpoint suggests using environmental resources efficiently, maintaining essential ecological processes, and preserving natural heritage and biodiversity. The economic perspective encompasses ensuring robust, long-term economic operations, delivering socio-economic benefits to all equally distributed stakeholders, including options for income generation and social services for host communities, and contributing to poverty alleviation. The socio-cultural dimension involves respecting the socio-cultural authenticity of host communities, conserving their built and living cultural heritage and traditions, and contributing to intercultural understanding and tolerance (United Nations Environment Programme & World Tourism Organization, 2005).

Innovation in Tourism Businesses

Generally, innovation means ‘(the use of) a new idea or method’ (Cambridge Dictionary, n.d.). However, innovation is a multi-dimensional concept, and various ways exist to define it (Korres, 2007). In the business context, Rogers (1998) described innovation as a series of significant changes in routine business activities that will result in improved performance for the firm. Schumpeter (1939) determined five different types of innovation: the formation of new products or services, new processes, raw materials, new markets, and new organisations. In the tourism industry, different innovative solutions can be applied, such as preparing new hotel services or adding new attractions at a destination; looking for new customer segments or improving tour guiding to enhance the efficiency and quality of the tourist experience; varying to new niche tour operators; reorienting existing destination brands to appeal to new markets; and facilitating business in a new way (Carlisle et al., 2013). Genç and Genç (2017) argue that implementing innovation impacts tourism by increasing the existing capacity of the tourism market, taking part in the survival of tourism, overcoming the possible adverse effects, and opening up saturated markets. Additionally, tourism innovation contributes to the local economy, promotes local enterprise development, and provides employment opportunities (Carlisle et al., 2013).

Much research addressing innovation's implications in the tourism industry is in pre-pandemic studies (e.g. Carvalho & Costa, 2011; Tolstad, 2014; Stanovcic et al., 2015; Genç & Genç, 2017; Attia et al., 2019). Little research has highlighted the role of innovation in tourism after the COVID-19 pandemic. Hernández et al. (2021) analysed the strategies and actions implemented by tourism small and medium-sized enterprises (SMEs), including souvenir shops, accommodation, restaurants, art galleries, etc., on the coastline of the Metropolitan Area of Puerto Vallarta, Mexico, after the COVID-19 pandemic. According to them, the studied tourism SMEs followed four types of innovation in response to the COVID-19 outbreak, including digitalisation of processes, contact with customers in the virtual environment, product and service design in digital environments, and business model adapta-

tion. Vuong and Tran (2021) explored the contribution of Artificial Intelligence (AI) in bringing new and other values to the tourism industry during the COVID-19 pandemic. They expressed that AI could drive new and safe customer experiences during the pandemic and beyond by pushing companies to redesign their products and services. Significantly, only two significant studies have been devoted to studying tourism innovations amid the COVID-19 era from the sustainability viewpoint. Buluk Eşitti (2022) learned how innovation could help the sustainability of post-COVID tourism. She believes that swinging to more sustainable forms based on broadened clean energy use, a fair and egalitarian approach, and the application of e-transformation and digitalisation will gain more traction regarding the sustainability of the tourism industry. Li et al. (2021) introduced technological innovation as a solution to a sustainable recovery of the tourism sector in response to the crisis of COVID-19. They argued that adopting technological advances, tools, and social media can produce beneficial results. The studies above further emphasised the role of new technologies, such as digital tools. However, this research introduces an empirical example of an eco-lodge as a sustainable pattern of tourism and its simple and applicable innovations in response to the COVID-19 pandemic in a developing destination. It is crucial because access to digital technologies is challenging for many less developed destinations due to poor infrastructures, high costs, etc.

Case Study

The studied eco-lodge is located 34 km from the Historic City of Yazd (see Figure 2). The Historic City of Yazd is the first city in Iran to be inscribed on UNESCO's World Heritage list in 2017.

The eco-lodge is originally an old adobe mansion with a unique architectural layout that dates back about 100 years. The eco-lodge has an area of 2000 m² and currently has nine rooms. Six people were employed with the launch of this eco-lodge in 2016 (Ministry of Cultural Heritage, Handicrafts and Tourism, 2016).

In Figure 2, an aerial photo of the ecolodge was illustrated.

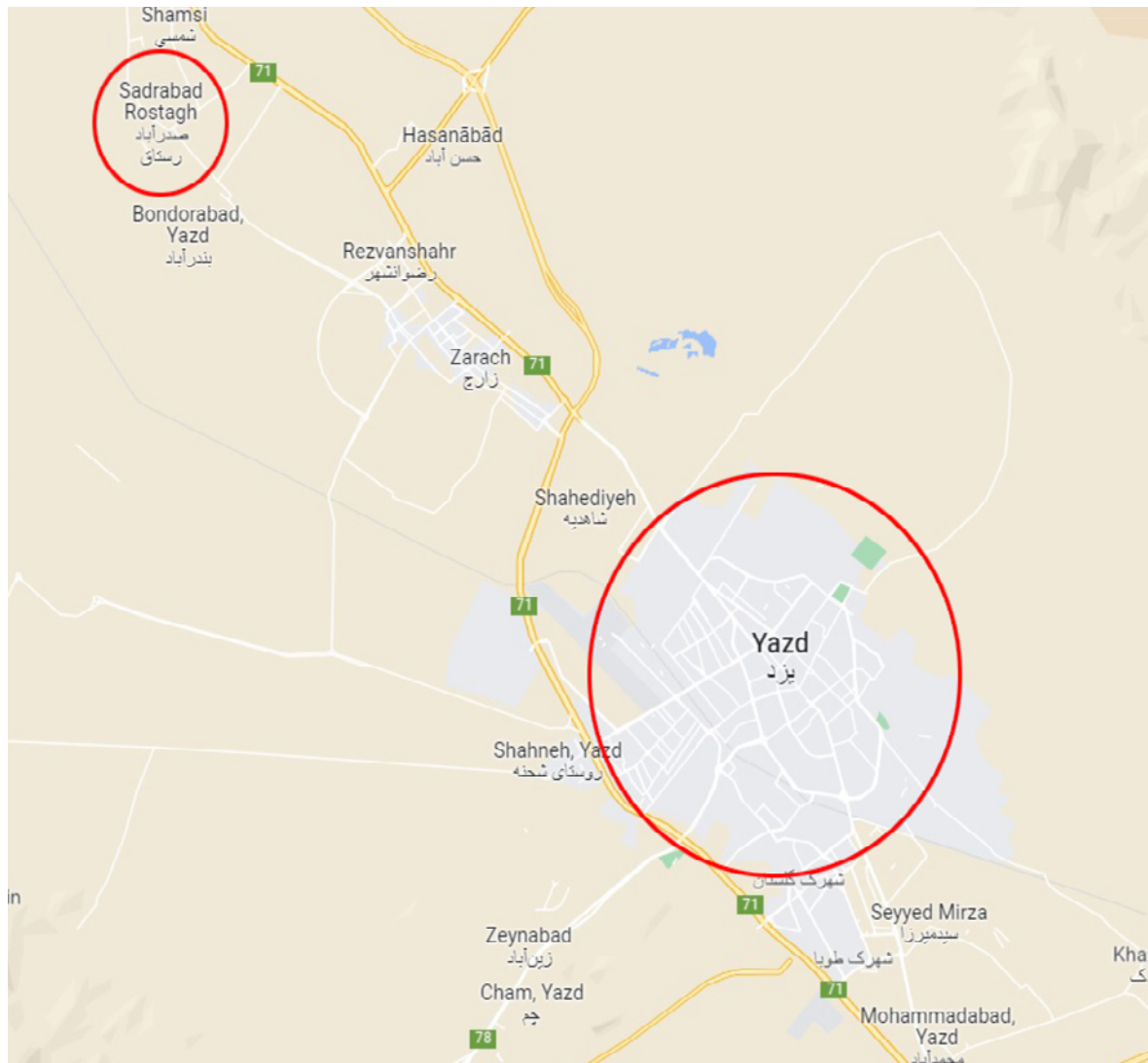


Figure 1 Location of the Ecolodge to the Yazd City

Method

The present study had two phases: (a) documentary research and (b) Semi-structured interview. In the first phase, documentary research was carried out so that the eco-lodge owner provided information, including photos and some descriptions of his activities, which he has been collecting on social media since the beginning days of the revitalisation operation. Then, researchers categorised them based on sustainability principles and in the periods before and during the pandemic. In the next phase, given the research prob-

lem and objectives, five questions were developed for the interview based on literature suggestions. The content of the questions consisted of:

1. Aims and motivations for setting up this eco-lodge.
2. The owner's attitude toward sustainability.
3. Purposes for engaging in various activities before the pandemic.



Figure 2 Aerial Photo of the Ecolodge

4. Reasons for shifting from tourist accommodation to implementing alternative activities after the outbreak.
5. Benefits of the innovations.

The interview was conducted with the owner of the eco-lodge in the Persian language. With the permission of the interview participant, the session was recorded. Then, it was transcribed verbatim and translated into English. The collected data were analysed using thematic analysis techniques. Thematic analysis is an appropriate method to better understand experiences, thoughts, or behaviours across a qualitative data set (Braun & Clarke, 2012). Following the procedure, we identified codes and themes, as Braun and Clarke (2006) suggested. In the analysis process, two of the authors participated in decreasing bias.

Documentary Research

According to the collected data, the categorization of the eco-lodge activities based on the sustainability

principles, including environmental, economic, and socio-cultural aspects in the periods before and during the pandemic, is shown in Tables 1 and 2.

Semi-structured Interview

Respondent Profile

The owner is a 34-year-old male, married, with a master's in conservation and restoration of historical buildings. He manages the eco-lodge but also teaches as an adjunct lecturer at universities.

Analysis and Interpretation of the Semi-Structured Interview

In analysing the interview materials, themes from the owner's responses were extracted.

Q1 *Why did you decide to rehabilitate this historic building as an eco-lodge?*

He responded: 'Well, this building is my ancestral mansion, which was being demolished. We rehabilitated it as an eco-lodge to ensure this house does not

Table 1 The Activities Before the Pandemic

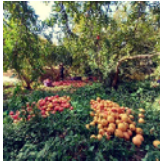
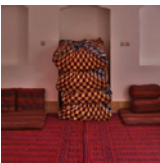
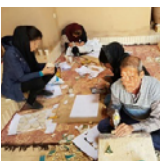
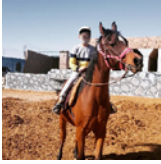
Activities			
Environmental			Preparing nests and seeds for birds in winter;
			Using indigenous fruits to cater to tourists.
Economic		Preparing financial support for locals through hiring women and youth;	
			Participating in the exhibition on sustainable development.
Socio-cultural			Using traditional architecture techniques and materials as well as implementing minimum intervention on the layout;
			Using local hand-made furniture and pottery;
		Introducing local traditions, artists, and handmade on the eco-lodge's social media;	
		Holding educational courses to familiarize university students with traditional architectural techniques.	
		Hosting traditional ceremonies and festivals;	
			Helping to the education of residents' children by selling products and allocating its profit to buy educational supplies
			Holding the extracurricular courses for the residents' children.
			Holding a campaign to promote the conservation of local architectural heritage;
			Hosting environmentally friendly tours like the bicycle riding tours.

Table 2 The Activities During the Pandemic

Activities	
Economic	 Collaborating with a local equestrian club to entertain children during the workshops;
	 Selling handicraft products by advertising the local artists on the eco-lodge's social media.nt.
Socio-cultural	 Holding creative events for children such as robotic and UAV workshops;
	 Cooperating with universities and NGOs to host entrepreneurship workshops and orphans;

deteriorate. I also learned about the nomination of the historic city of Yazd as a World Heritage Site (whs). On the one hand, it was located near Yazd; many travellers could attract it.

According to him, inheriting a deteriorated historic property in a whs suburb has motivated him to establish the eco-lodge. Some scholars (e.g., Attia et al., 2019; Jones et al., 2022) have remarked that the whs listing triggers the revitalisation of historic buildings for tourism purposes. After a site is inscribed on UNESCO's World Heritage List, the number of tourists who visit it will increase (United Nations Educational, Scientific and Cultural Organization, 2008).

Q2 How did you try to follow sustainability in your eco-lodge?

He responded: 'Considering my field was architecture, I paid attention to sustainability since the restoration, the minor work done in the building, such as materials and energy, had the most negligible negative impact on the environment. We had an ecological design if we wanted to add spaces. We also tried not to add anything to the building and adhered to its originality.

The eco-lodge is different from hotels, motels, and resorts. Eco-tourism is mainly in rural areas, although it is also seen in cities. Our guests usually have visited other cities in Iran, but what is important to them is the simplicity of eco-lodges, like the ambience and furniture. Familiarising themselves with the villagers'

lifestyle was very attractive to them. We also have a wonderful garden for tourists, and we even took them to the farmland of fruits when the travellers came, and sometimes they helped us. And they would like to be in such an environment. We also hold some traditional ceremonies and festivals where they are welcomed by tourists, especially during the Nowruz holidays.

Our workshops about the students differed; they did not think such things could be done in Iran. The difference between our eco-lodge and other eco-lodges is that the topic of education and culture is being done, and it is delightful for people. If our services in the field of tourism are weak and incomplete, it would not be evident to tourists because the learning issue is so interesting for them, and when we put effort into them, it sits in their hearts much more.

We also tried to help the local community by providing job opportunities or charitable assistance. I believe that when we allow the villagers, they will help us.

Many traditional ceremonies and festivals were hosted in the eco-lodge, where tourists welcomed them, especially during the Nowruz holidays.

Regarding the environment, we made a series of nests for the birds because we are in a desert area, and the birds were very hot. Because of the strong winds in the spring, we made a series of bird nests, which was a tourist attraction for tourists, and it was difficult for the birds to find food because the weather was

hot. We put wheat in the nests, and the birds stayed in the nests, and it was more attractive to tourists.' They always came to drink water at the pond's edge and nest in the trees. He has tried to follow sustainable tourism in terms of environmental, economic, and socio-cultural by respecting the environment, sharing economic benefits with locals, and providing a first-hand experience for the guests. These activities align with the sustainable tourism principles described by United Nations Environment Programme and World Tourism Organization (2005).

Q3 *What was your purpose in engaging in various activities along with tourist accommodation before the pandemic?*

He responded: 'Before the pandemic, we focused on cultural and educational tourism. His purpose in promoting cultural tourism was to raise public awareness regarding preserving monuments in the village or at least preventing them from being demolished. And for this, we held a campaign that started in a neighbouring village and spread to other villages. Because when a monument is ruined or dirty, tourists do not desire to visit. When tourists visit monuments, it causes the region to be introduced on social media.

Regarding educational tourism, we talked to architecture professors nationally and internationally, and some came to visit, even those who were not in architecture but were interested in monuments. Many students also came here to stay and practice architectural techniques. The monuments of the surrounding villages were surveyed by the students, which led to the registration of these monuments on the Iran National Heritage List. On the other hand, the students were unfamiliar with the practical topics of architecture and were practically unaware of traditional Iranian architecture. Practical classes and acquaintance with traditional architecture were held here, which attracted students. It was an excuse for them to come back again.

According to Georgakopoulou and Delitheou (2020), sustainable tourism development can be achieved by developing alternative forms of tourism. As Vărzaru et al. (2021) stated, sustainable tourism requires a long-term vision. He had a long-term idea for his business before the pandemic. Therefore, he has

promoted alternative forms of tourism, including cultural and educational tourism and tourist accommodation. In this regard, he has strived to preserve local tangible and intangible heritage as potential tourism resources. On the other hand, by holding architectural workshops for the students, he tried to provide a unique experience and earn the guests' loyalty.

Q4 *Why did you change your approach from just tourist accommodation to alternative activities after the outbreak?*

He responded: 'When Corona came, there were a lot of restrictions and rules that had to be followed, and eco-lodge had to follow these rules. On the one hand, we could not use government aid because its amount was low, and the conditions for receiving it were difficult. Tourists who wanted to go and visit the monuments were rare, and the number of tourists decreased. Since public awareness had dropped, especially among children, the decision was made to hold courses in architecture (tiling, mirror working, and mosaics), electronics, and robotics. Students could attend classes with their families during the Corona. This new approach was welcomed by many institutions, especially music and painting institutions. Artists and students from different universities came and held art workshops.' this change in approach made us realise that educational tourism has good potential, which we were weak in this regard, and we learned and experienced a lot. Due to the lack of tourist bookings, he focused on the local community and pursued educational tourism as an alternative form of tourism to survive; this is consistent with the results of Soliku et al. (2021) that the promotion of domestic tourism can enhance the resilience of the eco-tourism sector and Wang et al. (2021) and Abbas et al. (2021) that alternative tourism such as special programs for children and adolescents can accelerate the post-COVID-19 tourism recovery.

Q5 *How do you evaluate the benefits of implementing activities such as holding creative events for children, advertising the sale of local handicraft products on social media, and so on?*

He responded: "Financially, if I want to check, it had the minimum for us to be able to pay the employees,

water, electricity, and gas bills, and that eco-lodge should not be closed and depreciated due to the lack of people because when the furniture is not used, it has deteriorated. And termites and pests damage the building. The profitability of the eco-lodge itself was lower than before the Corona- not zero, but it was not very high. Parents used to come with their children initially because they were stressed. It made it difficult for us because there was a limit. We had to say for wearing the mask, and we had to accommodate any family in one room. And we did the disinfection steps before them so they would be relieved that everything was safe here. After the disinfection process, we preferred that if the weather was cold, we would work in the hall, the heating and air conditioning system was available, and the windows were open. And if it were sunny, we would work outdoors and in the yard. Recently, when people were less sensitive, the number of our groups, initially 6 or 7 people, had reached 30 by the end. The families safely sent their children, and they attended the courses much more willingly. Early in Corona, we made very little profit, but late in Corona and in the last few months, it was more and more because those who had seen the environment of the eco-lodge early had told their friends and relatives, and their number increased. The cost was unimportant to the families because they had a challenging time and wanted to attend the courses. People were already accustomed to the condition of Corona and accepted that it had become a part of their lives.

Selling online was not very profitable for us. We even had some difficulties because we were not familiar with it. But it made us visible in cyberspace and was a kind of advertisement for us. Because recently we had guests to stay in the eco-lodge who mentioned this themselves.”

Långstedt et al. (2022) argue that countermeasures such as hygiene and social distancing are deemed a significant source of safety for most customers in the hospitality industry. His words indicate that he has tried to create a sense of security for participants by following health protocols. Consequently, their satisfaction has acted as a marketing tool in such a way that it encouraged them to retake the courses and caused them to introduce the eco-lodge to their friends and

relatives. Furthermore, although online selling on social media did not provide direct financial benefits, it led to more familiarisation among people with the eco-lodge and its activities. In terms of monetary benefits, these activities resulted in minimum profitability in a short time. Still, it brought more benefits later and helped the eco-lodge continue operation without closure.

Conclusion

This research consists of two parts. In the first phase, the sustainable-oriented innovations of an eco-lodge located in UNESCO's World Heritage Site were explored. These innovations were introduced based on sustainable tourism's environmental, economic, and socio-cultural principles during the two periods before and during the COVID-19 pandemic. In the second phase, the authors conducted a semi-structured interview with the eco-lodge owner to deeply understand his experiences, thoughts, or behaviours in facing the pandemic. According to the findings, the owner's primary motivation to revitalise the eco-lodge was to count on an increase in the number of tourists due to the listing of Yazd on WHS. From the beginning, he has followed the principles of sustainable tourism by respecting the environment, sharing economic benefits with locals, and offering a first-hand experience for guests. Having a long-term vision based on the alternative forms of tourism –educational tourism– instead of relying solely on the income of tourist accommodation and focusing on the local community as his main customers helped him adapt his business to the difficult conditions caused by the COVID-19 outbreak. In this regard, he supported his activities by following hygiene, social distancing, and advertising on social media. The findings indicated an eco-lodge in a developing destination could survive amid the COVID-19 pandemic without using financial support from the government and only by applying simple and applicable sustainable innovations. It is important because previous literature proposed applying new technologies as a mainstream solution. At the same time, most tourism businesses in less developed destinations have challenges accessing digital technologies due to poor infrastructures, high costs, etc. Although the public's

concern about COVID-19 is declining and the tourism industry is returning to a normal situation, future research could further work on simple and applicable sustainable innovations applied by other types of tourism businesses or assess them in the context of different crises. The limitation of the research was that the authors only referred to the owner's statements and the information he provided. While it was more favourable, the authors could consider their observations and have the participants' feedback.

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