Contents lists available at ScienceDirect



Journal of Destination Marketing & Management

journal homepage: www.elsevier.com/locate/jdmm



Attracting digital nomads: Smart destination strategies, innovation and competitiveness

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Boundaries

^g Digital Nomadism, Consumer Behavior in Tourism

ARTICLE INFO

Keywords: Digital nomadism Mobility Destination policy Innovation Competitiveness Readiness

ABSTRACT

Digital nomadism, as a new form of tourist mobility, brings opportunities and challenges for destination management. To attract this new market, smart destinations need to innovate to develop readiness and competitiveness. This research examines 225 digital nomad destination web articles, from multiple sources and different continents. The study aims to identify innovative strategies and practices using semantic content analysis and hierarchical network analysis. It explores relevant stakeholders and their importance, and pinpoints digital nomad trends. Findings suggest that smart destinations cater for the work, travel, social, financial and basicliving needs of digital nomads. These are different from those of short-term leisure and business tourists. Destinations tend to portray digital nomads as a homogenous group, although different segments have been identified. The long-term impacts of digital nomads on local economies and societies have yet to be fully explored. The theoretical significance of this study lies in the provision of an agency-structural perspective of destination innovation and competitiveness. Practically, the study contributes to digital nomad management and marketing within smart tourist destinations.

1. Introduction

Smart destinations face opportunities and challenges in relation to the management and marketing of markets with diverse forms and patterns of mobility (Hannonen, Quintana, & Lehto, 2023; O' Regan, Salazar, Choe, & Buhalis, 2022). The COVID-19 pandemic and resulting remote work phenomenon made location-independent work possible and cultivated digital nomad markets. According to Statista, the number of digital nomads in the US has increased from 7.3 million in 2019 to 17.3 million in 2023 (MBO Partners, 2023). Digital nomad demand research has confirmed that this market is comparatively well educated and tends to work in the technology sector (Thompson, 2019). Smart destinations have seized the opportunity to innovate and promote this market, supporting internationalisation by improving accessibility and safety (Ma, Li, & Shang, 2022). The outcomes of the pandemic acted as an accelerator, as individuals learnt to work remotely. Destinations relying on tourism lost revenue and were forced to urgently seek new markets to compensate and support local tourism businesses (Buhalis, O'Connor, & Leung, 2023; Buhalis, Papathanassis, & Vafeidou, 2022, Li et al., 2023). Innovation increased destination competitiveness, enhanced destination readiness to new markets, and contributed to destination sustainability (Costa, Varum, Montenegro, & Gomes, 2022; Jeyacheya & Hampton, 2020).

Digital nomads can be defined as location-independent remote workers, who are simultaneously engaged in extensive leisure travel, while remaining at work digitally (Chevtaeva & Denizci-Guillet, 2021). They blend work and leisure by adopting a hybrid lifestyle (Rainoldi, Buhalis, & Ladkin, 2022a, 2022b). Researchers have distinguished digital nomads from workcationers, who travel for either leisure or business motives and perform work and leisure activities away from home

https://doi.org/10.1016/j.jdmm.2023.100850

Received 18 August 2023; Received in revised form 29 November 2023; Accepted 7 December 2023 Available online 3 January 2024 2212-571X/© 2023 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

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(Pecsek, 2018). The main difference being the length of stay and the level of engagement tourists have with the destination (Bassyiouny & Wilkesmann, 2023). Domestic digital nomadism or remote work travel, and workcation are subcategories of digital nomadism (Hannonen et al., 2023). This study proposes that digital nomadism is a hybrid form of mobility, practiced by location independent remote workers, who combine travel, leisure, and work activities. Digital nomad destinations offer products and services to digital nomad markets by providing a smart destination, ambient connectivity, and technological infrastructure (Buhalis, 2020). As destinations compete for the digital nomad market, it is pertinent to explore what innovative strategies can be applied to gain a competitive advantage.

Agency-structure theory, drawn from sociology, has been widely applied in management research (Dong, Karhade, Rai, & Xu, 2021). Agency refers to the individualistic capacity of action and structure pertains to regularities in social interaction, systematic social relationships, or script (Cockerham, 2005). Application of structure-agency duality in tourism destination research has considered the interplay between owner structures in tourism investment and the accounts of tourism actors (Meyer, 2013). Aarstad et al. (2018) referred to the characteristics of embedded interfirm networks as the structure and a firms' autonomous strategic actions as agency. Yildirim (2020) examined how structured agency co-constructed a touristic workplace. Structure enables and constrains agency. As rules and resources are inherent in structure, actors are enabled through available resources but restrained by existing rules (Giddons, 1984). The interplay between structure and agency facilitates action and practice. Smart destination stakeholders seeking digital nomadism need to innovate to develop capacity and competence. When facing the multiple needs of digital nomads, destinations require stakeholder innovation and integrated frameworks to satisfy traveller needs (Matteucci, Nawijn, & von Zumbusch, 2021). Innovation and the cooperative capacity of stakeholders may help to develop valuable relationships and strong leadership to improve competitiveness (Cooper, 2018). Innovation is the process of engaging in new improvement and novel ideas related to a product or service, process, marketing, organisational method, or workplace organisation. Innovation may influence external relationships and the commercial or industrial implementation of improvement and novelty (Hjalager, 2010).

This study adopts a structure-agency approach to categorise innovation and examine the interplay between stakeholders and digital nomad destination innovation. The purpose of this study is to identify digital nomad destination innovation and outline the implications for smart destinations to manage diversified mobility markets. The study applies an innovation framework to destinations seeking to attract new mobility markets, such as digital nomads. The research aims to answer the following questions.

- a. What are the destination characteristics that attract digital nomad markets?
- b. How do digital nomad destinations innovate to meet the needs of the new market and who are the local and international stakeholders in this process of destination innovation?
- c. How do structural and agency-based innovations interplay within digital nomad destinations?

By adopting the agency-structure approach and a macro perspective, this research examines web content and evaluates the characteristics and innovation demonstrated by existing digital nomad destinations. The work also investigates the involvement of stakeholders in destination innovation, and identifies trends and recommendations for destinations wishing to market to and manage digital nomads.

2. Digital nomadism for tourism destinations

2.1. The supply side of digital nomadism

Digital nomad research has tended to focus on the demand side and has identified the motivations, profiles, and wellbeing of this unique tourist market (Adams & Bloch, 2022; Bassyiouny & Wilkesmann, 2023; Hannonen, 2020; Rainoldi et al., 2022a, 2022b). Recent research has shifted emphasis to suppliers of digital nomadism by examining mature digital nomad destinations. Hannonen et al. (2023) applied stakeholder theory to understand how local stakeholders perceive digital nomads as new locals in Spain. Accommodative strategies of local stakeholders correlate strongly with stakeholder specialisations. Digital nomads were seen as a more permanent group of tourists, despite individual mobility being temporary. This market can address seasonality for destinations (McKercher, Prideaux, & Thompson, 2023). Other destinations such as Indonesia, Portugal, Thailand, Saudi, and Colombia were also studied to examine how destinations capture this opportunity to attract digital nomad markets and offer a safe and attractive work and play environment (Algassim, Saufi, & Scott, 2023; Ma et al., 2022). Destinations projected a digital nomad friendly image, with ideal conditions to live and work (Zerva, Huete, & Segovia-Pérez, 2023). Nomads can be suitable markets for activities across boarders (Kozak & Buhalis, 2019). Mature digital nomad destinations offer high-performing technological infrastructure, digital nomad communities, co-working spaces to maintain work routines, and extensive leisure infrastructure such as bars and coffee shops for networking. Other pull factors include mild climates, reduced cost of living, easy to obtain long-term visas, a variety of sport and wellness options, vibrant cultural life and nightlife, and proximity to nature (Mancinelli, 2022). Social networking sites and social connectedness with other digital nomads is considered to be essential for a digital nomad ecosystem (Li et al., 2023).

New suppliers catering to the needs of digital nomads emerge such as co-working space operators. The hospitality sector adjusts their products to satisfy the needs of the digital nomad (Borges et al., 2022) as this market presented an opportunity to recover from the pandemic (Schalk-Nador & Rašovská, 2023). During COVID-19 many hotels offered 'work-from-hotel' or 'workation' packages to attract remote workers. The newly emerged service office industry and the hospitality industry integrated services such as cafés, hotels, restaurants, and pubs to integrate coworking provisions (Merkel, 2022, pp. 140-147). Online platforms were developed to assist digital nomads to find information and opportunities related to gig work, local lifestyle, workspace booking, and social companionship. Platforms such as Spacemize and KettleSpace broker remote workers with temporary workplaces in restaurants, hotel lobbies, or bars. Destinations and suppliers associated with digital nomadism have been reshaped through new socio-spatial patterns related to mobile digital work (Merkel, 2022, pp. 140-147). This supply of digital nomadism has received increased research attention, but the implications for destination management and innovation have yet to be sufficiently examined.

2.2. Destination competitiveness, readiness, and innovation

Innovation has been driving destination competitiveness in the global tourism industry (Cronjé & du Plessis, 2020; Xu & Au, 2023). Trunfio and Campana (2019) have argued that innovation in tourism destination research is scattered and fragmented. The cooperative capabilities of different stakeholders are important for entrepreneurship and destination competitiveness (Goffi, Cucculelli, & Del Chiappa, 2022, pp. 1–25). Innovative entrepreneurs have recognised the importance of tourism lifestyle in the provision of competitive tourist products (Dias, González-Rodríguez, & Patuleia, 2021). Knowledge-sharing, collaboration, and value co-creation enhance destination competitiveness (Melis, McCabe, Atzeni, & Del Chiappa, 2023). Smartness and digitalisation have also been closely linked with destination competitiveness (Buhalis,

2020; Cimbaljević, Stankov, & Pavluković, 2019; Zainal-Abidin, Scarles, & Lundberg, 2023). The development of information and communication technologies (ICT) propels destination smart ecosystems (Boes, Buhalis, & Inversini, 2016; Williams, Rodriguez, & Makkonen, 2020). While tourism demand becomes more sophisticated, destinations must innovate to attract tech savvy tourists by providing adaptive services and processes (Cimbaljević et al., 2019, Sánchez & López, 2016).

Innovation is a continuous process of governance that provides transformative ways to improve the experiences of stakeholders (Sørensen & Balsby, 2021). Destination innovation research has covered diverse scales and types, such as community-based destinations (Pikkemaat, Peters, & Chan, 2018), rural destinations (Komppula, 2014), and smart destinations (Buhalis, 2020; Williams et al., 2020; Yang & Zhang, 2022). Hjalager (2010) explored the dimensions of product or service innovation, process, management, marketing, and institutional innovation. Ozseker (2018) integrated literature from cluster theory, innovation systems, network relations, knowledge management, and innovation to propose five stages of innovation within tourism destinations: clustering, integration, configuration, conversion, transfer and implementation. Gardiner and Scott (2018) provided a destination innovation matrix to capture the innovation process. The matrix highlighted market innovation, consolidation, transformational innovation, and experience innovation. Market innovation and consolidation offer existing experiences, while transformational and experience innovation aims to create new experiences. Destinations need to innovate to gain competitiveness and readiness for digital nomads.

2.3. Destination innovation and digital nomadism

Digital nomadism, as a new form of lifestyle mobility, offers new opportunities for both core and peripheral destinations. Destination communities are confronted with complex, interrelated issues, and constant change that requires new ways of thinking (Matteucci et al., 2021). The diffusion of innovation theory stresses that innovative ideas can spread through channels. However, the speed at which individuals and organisations respond to innovation may differ (Rogers, Singhal, & Quinlan, 2019). Digital nomadism represents an innovative lifestyle, and urban and mature destinations were the first to react to digital nomad demand due to existing infrastructure capacity. Diversified mobility also created opportunities for rural and peripheral destinations, where smaller population density and the natural environment created a point of difference from urban and crowded tourist destinations (Almeida & Belezas, 2022; Garcez, Correia, & Carvalho, 2022).

Policy can support development by guiding institutional and governmental actions. In Portugal and Spain, projects such as the "Digital Nomad Madeira" and "Nomad City Gran Canaria" were developed to convert the destinations into digital nomad hubs. Both destinations acted strategically but local industries did not seem to be able to keep pace (Almeida & Belezas, 2022). From the supply side, visas can impact on the provision of tourism labour in countries seeking migration (Terry, 2018). Many visa studies are based on security theory, which postulates that political forces elevate a person, event, or issue to a national security matter, thereby causing certain policies to be enacted (Hobolth, 2014). Visa restrictions limit foreigners' mobility within state borders. Security theory proposes that travellers from economically poor or politically unstable countries are more likely to face stringent visa restrictions when traveling to other destinations (Bangwayo-Skeete & Skeete, 2017). Hence, visas are an important influencer of tourism mobility (Kuzey, Karaman, & Akman, 2019). Yudhistira, Sofiyandi, Indriyani, and Pratama (2021) found that changes to Indonesia's visa exemption policy from 2015 to 2016 provided greater benefits for less-traditional destinations. Chau and Yan's (2021) explained that waiving visas or applying a more simplified application procedure was a factor related to destination atmosphere and ambience.

Digital nomads are also highly motivated users of online platforms, services, and social media sites (Lexhagen & Conti, 2022; Li et al., 2023).

Applying an agency-structure approach, entrepreneurs, businesses, and organisations, locally and internationally, are agencies of destination innovation. The legal and institutional processes are considered the structural environment. Agency theory considers the relationship and alignment between a principal and an agent in the organisational context from a positivist perspective (Bendickson, Muldoon, Liguori, & Davis, 2016). Within the destination context, the principal is regarded as the destination collective, and the agent as the actors and stakeholders within the destination system. Drawing on agency theory (Bendickson et al., 2016), destinations and other organisational stakeholders may innovate to increase their capacity and competitiveness to cater to this market in a strategic or opportunistic manner. Through the process of innovation, businesses and organisations as agencies gain control and use resources to diversify tourism revenue. From the dichotomy of structure and agency, the five dimensions of destination innovation can be further theorised based on the innovating agency and actors. Applying destination innovation dimensions (Hjalager, 2010) to the digital nomadism context supports the destination innovation framework (Fig. 1) and identifies product or service innovation, managerial innovation, and marketing innovation. The destination innovation system consists of agency-based innovation and structural innovation. Local and international stakeholders can actively participate within this innovative process. Arrows in the figure represent material and informational connections and interactive relationships. Agency-based innovation involves independent and individual actors working to increase their capacity. Structural innovation, in the form of process innovation and institutional innovation, is transformative for the destination competitiveness.

3. Methodology

The study applied a deductive approach, primarily using secondary data. Web news on digital nomad destinations were collected as the main source of data. As the pandemic accelerated the increase of digital nomadism as a mobility phenomenon, to capture innovation we selected news items from January 2020 to April 2023. Data was selected using the keywords "digital nomad" and "destination" from Google news. The data mining software Bazhuayu was used to gather web content. The Google news platform was selected as it provided diversified sources and offered headline stories on a subject. In total, 242 results were gathered, after initial screening of the content, 17 repeated pieces were deleted, with 225 news articles remaining. The articles were in English and were produced by worldwide media and digital nomad agencies. We also collected policies related to digital nomadism from the destination country's official tourism and immigration websites. Data was also collected from third-party organisations including Visaguide, Citizen Remote, and Nomadlist. The policies were mainly related to visas and taxation from the various countries. Digital nomad visas were issued by 51 countries by April 2023. Visa requirements were collected from official sources, of which 36 countries had explicit taxation policies accompanying the visa schemes. The textual data were imported to Nvivo 10 and analysed using manual content analysis and hierarchical network analysis.

The web articles were preliminarily categorised into six groups based on the web sources: local and global media sites, business sites, technology sites, digital nomad sites, travel and lifestyle sites, and social media sites (Table 1). A total of 88 articles were sourced from official media, representing 39.1% of the data set. Of these, 69 articles were from business websites. The variety of sources indicates the diversity of data collected.

The main content of web articles included four major categories: single digital nomad destination promotion, listed promotion of digital nomad destinations, digital nomad visas, and digital nomad experiences (Table 2).

The deductive semantic content analysis included the following steps: data familiarisation, initial code generation, a thematic search



Fig. 1. Digital nomad destination innovation framework.

Table 1				
Sources of a	ollected	web	article	s

Category	Examples of sources	Number	Percent
Local and global news sites	https://www.cnbc.com https://www.thenationalnews. com	88	39.1%
	https://www.bbc.com https://total-croatia-news.com https://greekreporter.com		
Business sites	https://www.forbes.com https://ceoworld.biz https://www.businessinsider.in	69	30.7%
Technology sites	/ https://tech.co/ https://fintechnews.eu/ https://thenextweb.com/	16	7.1%
Digital nomad sites	https://dnacroatia.com/ https://nomadsembassy.com/ https://digitalnomadcafe.com/	16	7.1%
Travel and lifestyle sites	https://www.zumper.com https://www.travelawaits.com https://blog.yelp.com/ https://www.schengenvisainfo. com/	28	12.4%
Social media sites	https://www.pinterest.com/ https://www.linkedin.cn	8	3.6%
Total		225	100%

Content of collected articles.

Main subject of articles	Main content	Number of news articles
Single digital nomad destination promotion	Introducing a single destination with information that attracts digital nomads.	101
Listed promotion of digital nomad destinations	Destination lists based on geographical location, potential market, or unique destination features.	56
Digital nomad visa	Introducing digital nomad visa policies of one or a number of countries.	48
Digital nomad experiences n = 225	Digital nomad experiences and explanation of the lifestyle.	20

among codes, thematic review, naming or defining the theme, and report production. The development of themes was based on the three research questions, including: the traits of destinations, innovative strategies, stakeholders, and agency-structure linkages. Codes were developed under each theme and the content were manually aligned with the codes. Prominent sub-categories were also developed to capture specific innovation tactics. Themes and categories were also connected to interpret the drivers of innovation and the potential impact of digital nomads on destinations.

The main theme within innovative strategies formed two key categories: agency-based innovation and structural innovation. The three main groups of stakeholders included destination-based stakeholders, international stakeholders, and institutional stakeholders. Innovation categories and stakeholders are presented in Table 2. Hierarchical network analysis was conducted based on the interconnections between stakeholders and web content innovation, to identify key innovators and best practices within digital nomad destinations. Stakeholder metrics were developed based on the relationships between the stakeholders and innovative strategies. Network analysis has been applied to identify core relationships in text and has proven to be a useful tool (Drieger, 2013). Metrics and analysis were conducted using Ucinet 6. There was a total of 397 paired relations within the original text. Of which, 11 pairs fell within innovation codes, 229 pairs between stakeholders, and 157 pairs between innovation and stakeholders. The number of occurrences of the paired relationships within stakeholder groups and between stakeholders and innovation is shown in Tables 3 and 4. Pieters et al.'s (1993) threshold selection method, identified that the most frequent relationship in the study was between B12->B25 (the link between communities/social platforms and local business and services). The total number of relationships was 27, so we chose a fixed threshold of 7 (27/ 397 = 6.8%). Relationship pairs with occurrences \geq 7 have been marked in bold in Tables 4 and 5. The higher the number of occurrences, the stronger the correlation between the relationship pairs.

4. Findings

The findings highlight the main characteristics of digital nomad destinations. The main innovative strategies are then summarised and articulated, and the major stakeholders are identified. The interplay between structure and agency in digital nomad destination innovation is highlighted.

Themes and categories of digital nomad destination innovation and stakeholders.

Theme	Category	Code
Innovations	Structural innovation (A1) Agency-based innovation (A2)	Digital nomad visa (A11) Tax exemption/reduction policy (A12) Digital nomad market-driven products and services (A21) Marketing and campaigning initiatives (A22)
Stakeholders	International stakeholders (S1)	Remote work platforms/employers/ customers (S11) Digital nomad virtual communities/ social platforms (S12) Online travel agencies and airlines (S13) International banks and financial service platforms (S14) Online shopping and logistics platforms (S15)
	Destination-based stakeholders (S2)	Co-working space operators (S21) Local digital nomad communities (S22) Local travel business and services (S23) Local financial business and services (S24) Local accommodation, food, retail, and lifestyle business and services (S25)
	Institutional stakeholders (S3)	Immigration and customs (S31) Government associations (S32) National ministries and authorities (S33) Destination marketing organisations (DMO) (S34)

4.1. International digital nomad destinations characteristics

International digital nomad destinations promoted at both countries and cities levels. According to the number of appearances in the web content, the destination countries and their frequency of appearance are presented in Table 6. In total, 72 destinations were mentioned in the articles and their frequency of appearance reflected the awareness of the digital nomad market from a destination perspective. Nine of the most frequently mentioned countries offered digital nomad visas, except Anguilla and Barbuda, which already had fairly open visitor visa policies. The mostly frequently mentioned destinations were Portugal, Croatia, Mexico, Spain, Colombia, Thailand, and Greece. This suggests that digital nomad destinations are traditional international tourist destinations, mainly catering to the European and North American markets.

Of the top ten destinations presented in Table 6, some were not highly ranked international tourist destinations (UNWTO 2023); for example, Croatia, Anguilla, and Barbuda. Mature tourist destinations considered the digital nomad market to be high quality and more sustainable with regard to environmental and social behaviours. With increased concern related to tourism during the pandemic, destinations

Table 4

Relationship metrics within stakeholder groups.

such as Bali sought to diversify existing markets and shift their focus to higher quality groups with more spending power. Destinations in peripheral areas and emerging destinations also considered digital nomads a valuable source of revenue to boost local tourism and increase their resilience (Zerva, et al., 2023).

Digital nomad destinations attractors included primarily seven key aspects: culture and history, nature and climate, infrastructure, work facilities, service amenities, economic and financial aspects, and social/political aspects, as presented in Table 7.

Nature and climate were key factors and many island and beach destinations market their natural environment and island climate to attract digital nomads. Other destinations focus on natural scenery, landscape, hours of daylight, wild animals, and wellness activities. Destinations that have less climatic appeal also marketed based on natural attractions. Norway for example, placed a strong emphasis on polar bears and the northern lights in their digital nomad marketing.

Culture and history were also appraised by digital nomads with rich cultural and historical resources, including architecture, museums, archaeological sites, historical vibe, and cultural events being key attractions. Local specialties, wines, and gastronomy were also presented.

Economic and financial factors were the most prevalent, as digital nomads seek quality of life within a destination. The cost of living was listed and compared within web content. Affordability of daily products, dining, accommodation, and activities were proposed as attractors, especially in developing destinations. Since many digital nomads have unstable jobs or work on projects, they often have irregular income and therefore require low cost of living.

Infrastructure was considered important and included factors such as digital capacity and readiness, public transport and urbanity. Digital nomad destinations tended to concentrate on tourist areas with more developed infrastructure. Destinations also stressed their cosmopolitan features when showcased online.

Table 5

Relationship metrics between innovation and stakeholders.

	A11	A12	A21	A22
S11	-	-	-	-
S12	4	1	5	6
S13	4	-	4	7
S14	1	-	-	1
S15	-	1	-	_
S21	3	-	-	7
S22	2	-	-	16
S23	7	-	2	14
S24	3	-	2	8
S25	4	-	2	12
\$31	2	-	-	_
\$32	2	1	-	8
S 33	14	3	1	9
S 34	_	_	_	1

Itelationsin										
	S11	S12	S13	S14	S15	S21	S22	S23	S24	S25
S11										
S12	5									
S13	-	11								
S14	-	6	-							
S15	-	3	-	-						
S21	_	22	_	_	_					
S22	1	18	1	-	-	5				
S23	-	24	2	-	-	1	4			
S24	1	19	-	1	-	1	1	4		
S25	-	27	3	-	-	1	13	4	4	
S 31	_	_	_	_	_	1	_	_	_	_
S32	_	1	2	_	_	_	3	2	_	_
S 33	2	5	4	-	1	6	4	5	4	4
S 34	_	_	_	_	_	_	1	1	_	1

Digital nomad country destinations appeared in web articles.

Country	Frequency	Country	Frequency	Country	Frequency
Portugal	29	Barbados	5	Guatemala	2
Croatia	26	Oman	4	Grenada	2
Mexico	21	Malta	4	France	2
Spain	18	India	4	Cyprus	2
Colombia	18	Australia	4	Cape Verde	2
Thailand	16	Argentina	4	Turkey	1
Greece	11	Albania	4	Sri Lanka	1
Anguilla and Barbuda	11	United States of America	3	Slovenia	1
Panama	10	Uruguay	3	Seychelles	1
Brazil	10	Norway	3	Rwanda	1
Georgia	9	Montenegro	3	Poland	1
Costa Rica	9	Japan	3	Philippines	1
Germany	8	Dominica	3	Peru	1
United Kingdom	8	Canada	3	Niger	1
South Africa	7	Lithuania	3	Nicaragua	1
Indonesia	7	United Arab Emirates	2	Nepal	1
Hungary	7	Switzerland	2	Namibia	1
New Zealand	6	Serbia	2	Korea	1
Mauritius	6	Macedonia	2	Kenya	1
Estonia	6	Netherlands	2	Israel	1
Czech Republic	6	Morocco	2	Ireland	1
Vietnam	5	Malaysia	2	Ghana	1
Italy	5	Luxembourg	2	Egypt	1
Ecuador	5	Latvia	2	Bahamas	1
Bulgaria	5	Iceland	2	Aruba	1
n = 372					

Table 7

Digital nomad destinations attractors.

bisitui nomuu destinutions uttractors.					
Categories of destination attractors	Specific destination characteristics	Quotes from data			
Culture and history	Culture and history, food, and events.	A rich history and a vibrant culture, with cobblestone streets, colorful architecture, and stunning volcanoes that provide a breathtaking backdrop			
Nature and climate	Weather, landscape, temperature, and natural attractions.	The country boasts a warm and sunny climate, making it an excellent location for those who enjoy outdoor activities.			
Infrastructure	Public transport and cosmopolitan/urbanity.	As the country's capital city, getting around Greece is quite easy thanks to frequent and convenient schedules and transportation.			
Work facilities	Co-working space, internet speed, and technology hubs.	Digital nomads will be satisfied with the cafe and coworking options they have to work from			
Service amenities	Accommodation, laundry, restaurants and pubs, leisure and recreational facilities, and nightlife.	Budapast has a top-notch food and nightlife scene, and even affordable fine-dining experiences.			
Economic and financial aspects	Cost of living and affordability.	It's also an incredibly affordable place to live. International Living named Colombia the cheapest place to live in 2023 with the best quality of life.			
Social/political aspects	Political stability, safety and security, friendliness of local people, language, inclusiveness, and a digital nomad community.	Contrary to popular belief, Central America is fairly safe for tourists and digital nomads. While there may have been issues in the past, the region has become much safer over the years.			

Work facilities was a key differentiator between a digital nomad destination and tourist destinations. As digital nomads work while traveling, work-related facilities are considered to be essential. Specific characteristics include the quality and quantity of co-working spaces, internet connectivity, wi-fi speed, and access to technology hubs. Destinations with established work-related facilities are more attractive to digital nomads.

Service amenities also need to meet the demands of the digital nomad market. The main service amenities include accommodation, laundry, restaurants and pubs, leisure and recreational facilities, and nightlife. The service products are provided to meet the needs of longterm stay digital nomads.

Social/political aspects.

Social and political aspects also feature in digital nomad destination marketing. Security and safety are primary concerns for digital nomads, therefore social and political stability is a key characteristic for a digital nomad destination. Other characteristics include the friendliness of the local people, and English-speaking capacity. Inclusiveness also appeared to be an important aspect, as some articles targeted niche markets such as female or LGBTQ digital nomads. Therefore, the inclusiveness of the destination is a critical criterion. Inclusive destinations emphasise reduced barriers and the provision of tourist products to all social groups and equal distribution of tourism incomes (Gillovic & McIntosh, 2020; Scheyvens & Biddulph, 2018). A sense of community and an established digital nomad community at a destination is another attractor within this category.

The destination characteristics and facilities that appeal to digital nomads consists of various layers. The core products are similar to those of a general tourist, such as natural, cultural and lifestyle resources, and basic facilities and amenities. However, the digital nomad working environment also requires economic and financial attributes and work facilities. These additional services provide destinations with valueadding features and appeal. Although the web content was largely positive in the promotion of digital nomad destinations, destinations tended not to over embellish. Destinations have acknowledged disadvantages or drawbacks such as the speed of the internet and the rainy weather. For example, in relation to Cancun, Mexico, one article wrote "From a digital perspective, Cancun isn't known for its internet speeds; sources online have WiFi download speeds averaging just 3mbps, though expect this to be higher in purpose-built locations such as coworking spaces. Whilst that's fine for most simple laptop-based projects, be prepared for some stuttering if you're planning a video conference" (Quote from dataset). Managing expectations and presenting a true reflection of the destination situation is critical for the digital nomads satisfaction as they commit a long period of time and rely in local conditions for both work and living.

4.2. Innovation of digital nomad destinations

Following the destination innovation framework, innovative strategies from the web content were examined by analysing the structural and agency-based innovations in the digital destination system and the various stakeholders involved. Structural innovation in digital nomad destinations includes policy and institutional innovation and innovative processes. For digital nomad destinations, there were two main interconnected strategies, namely: digital nomad visas and tax policies.

Digital nomad visa is a primary form of institutional and process innovation, which shows the political efforts of destinations to attract and retain this market group. Motivated by the COVID crisis in 2020, many countries/regions began issuing digital nomad visas or similar permits, which allowed digital nomads to stay longer in a country. It aimed at boosting tourist revenue lost during the height of the pandemic. Digital nomad visa holders are not allowed to seek employment or engage in local economic business activities. They must obtain income remotely from outside of the destination if they wished to gain temporary residency.

Based on the publicly available national immigration information, by April 2023, there were 51 countries/regions offering digital nomad visas or their equivalent, under titles such as remote work visas, nomad visas, location-independent visas, independent contractor visas, freelancer visas, or temporary residence permits. Fig. 2 presents the distribution of these countries/regions according to continent. The Americas, especially South America, and Europe offered the greater number of digital nomad visas. European countries were among the first to issue digital nomad visas, followed by Southeast Asia, and South America. Since 2023, there has been a growing trend in African countries to offer digital nomad visas. While the visas are aimed towards remote workers, countries such as Bermuda and Bahamas were also open to university students. Among the 51 destinations, 33 did not specify the visa eligibility of the spouse and children of the applicant, while 18 allowed applicants to bring family and dependents with higher evidentiary requirements of income capacity. Despite the requirement to prove income capacity, some countries also listed evidence of a clear criminal record and health insurance as digital nomad visa application requirements. Visa processing times range from 7 to 30 days. The digital nomad visa regimes reinforce the global north and global south divide. The income threshold and range of eligible countries demonstrate that these visas were aimed at digital nomads from developed countries, with



Fig. 2. Distribution of destinations with digital nomad visas.

high income and welfare.

Although visa data was not disclosed for all countries, there was evidence of increased tourist arrivals and digital nomads contributing to tourism recovery. Digital nomads shared generally positive experiences and became a valuable branding tool for destinations that wanted to attract this market and present a cutting-edge image. However, there were criticisms of bureaucratic procedures in some destinations when compared with efficient home administrative systems.

Tax exemption/reduction policies often accompany the digital nomad visa. Digital nomads are very aware of taxation, as stays over 183 days will be taxed as a resident. Some countries with digital nomad visas allowed visa holders to be non-tax residents for up to one year of stay, where incomes are derived from other countries, while other countries offer tax reductions. For example, in Costa Rica, residents pay a 30% tax, whereas digital nomads are only required to pay 10–15% tax on their income. Portugal's Non-habitual Residency scheme offers entrepreneur residency visas, if they spend more than 183 days in the country each year, but send no more than 60% of their income back home. Greece offers a 50% tax reduction program for those who stay for a minimum of two years. Other countries, including Norway, Hungry, Georgia, and Mauritius, state that temporary residents who stay longer than 183 days will be taxed as residents.

Agency-based innovation supports digital nomad market-driven products and services. Technological innovations were prevalent in digital nomad destinations. Most countries are investing heavily in digital infrastructure to ensure easy access to the internet. Destinations collaborated with large technological companies to improve digital infrastructure and connectivity and enhance the mobility of digital nomads. International financial companies also participated in the destination's innovation system. For example, Greece has cooperated with Visa Credit Card for the provision of transaction data to promote the destination to digital nomads. Local businesses also perform market and transformative innovations to accommodate the digital nomad market (Gardiner & Scott, 2018). To promote existing facilities to the new market, tourism and hospitality businesses, including hotels and restaurants, upgraded their technological facilities, increased internet speeds, and converted spaces into co-working stations. Non-tourism businesses also carried out market innovations, including the real estate sector, which provides customised services and facilities. Many properties were developed and distributed in AirBnB listings and many of them were offered on long term lease to digital nomads (Buhalis, Andreu, & Gnoth, 2020). Transformative innovations were opportunity-seeking, represented by the emergence of commercial co-working spaces and entrepreneurship providing services, such as accounting, taxation, immigration, and travel services. These services may not be destination-bound, as global agencies are increasingly aiming to serve this market. Innovation related to digital nomad products and services was largely based on existing tourist products and services and extended their offering for this market.

Marketing and tourism campaign innovations were also seen in various digital nomad destinations. Marketing initiatives include topdown branding, as destinations established digital nomad associations, marketing campaigns, and targeted digital nomad events. Digital nomad destinations value their technological presence and image. For example, Bermuda reinforces the message that it is a blue-chip destination where technology-enabled individuals and organisations can embrace their creativity. An ecosystem of digital nomad destinations was established and marketed online. Destination lists were developed by various agencies and organisations, including digital nomad platforms such as Nomadlist, NomadX, Nomad Capitalist, and Nomad Embassy. Online tourism operators such as Airbnb and Allianz Travel also developed relevant sections. Technological and digital entrepreneurship platforms, such as: Crucial Constructs, Lemon. io, human resources and consultancies companies, insurance platforms, and real estate service providers such as Yelp, Zillow, and InsureMyTrip also provide relevant services. Destination-based organisations and businesses also focused

their offering to this market. Examples include Digital Nomad Croatia, Mymovermexico.com, Canggu Digital Nomad Travel Guide, and Malaysia Digital Economy Corporation. Digital nomad destination lists include comprehensive information for this market including: geographical location, remote work options, weather and climate, cost of living, accessibility, housing, inclusiveness, and integrated factors, as presented in Table 8.

4.3. Local and international stakeholders in innovation

Multiple stakeholders participated in digital nomad destination innovation. For structural innovation, destinations integrated immigration and national security, financial and taxation, destination management, and marketing institutions need to develop innovative policies and processes. These efforts include local, international, and institutional stakeholders. In agency-based innovation, destinations encourage local businesses to innovate, providing services to the new market, while also collaborating with private and public stakeholders for marketing and branding. Based on the web content, major stakeholders include

Table 8

Examples of digital nomad destination listings.

Listing criteria	Agencies and initiators	Examples of digital nomad destination listings
Geographical location	Digital nomad platforms and local organisations.	The best Spanish and Portuguese cities for digital nomads. Eight best African cities for digital nomads. Most recommended Caribbean digital nomad destinations. 32 Best cities for digital nomads in Central and Eastern Europe.
Remote work	Digital nomad platforms, online travel services and remote work services.	Community site Digital Nomads rounded up the world's top destinations for people looking to work remotely. Top Destinations for online fintech workers and digital nomads in 2023. Digital nomad destinations from Airbnb and Reviews.org: Work from home top choices. Fourteen top destinations for
Cost of living	Digital nomad platforms.	remote work. 4 of the cheapest and most incredible destinations for digital nomads this year. 10 TOP cities to live under \$2000 as a digital nomad. Most affordable destinations for digital nomads in the U.S. & Canada.
Weather and climate	Digital nomad platforms.	 Canada. 6 Sunny digital nomad hotspots where you can escape the cold this winter. 10 Best paradisiacal beach destinations for digital nomads.
Accessibility	Digital nomad platforms.	Easiest countries to get a digital nomad visa.
Housing	Real estate service providers.	The top U.S. metros for digital nomads based on available, affordable and flexible rental housing and community amenities.
Inclusiveness	Digital nomad platforms.	The top 5 safest, healthiest countries for female digital nomads. Where is best to live and work
Integrated factors	Digital nomad platforms.	for LGBTQ + digital nomads? The best destinations for digital nomads: A new survey These cities around the globe are ideal for digital nomads.

local businesses, online recruitment platforms, international corporations, digital nomad communities and organisations, and destination management organisations. Digital nomad communities were important stakeholders in connecting destinations with this new market. These communities were formed through formal membership on virtual platforms, such as Nomadlist, or informal social media groups. The types of stakeholders that emerged from the web content were further categorised based on the needs of digital nomads and the scale of influence (Fig. 3).

Digital nomad destinations collaborated with different types of stakeholders to meet the needs of the new market. Based on results of the network analysis, three major types of stakeholders, international, destination-based, and institutional were identified. These were further broken down into thirteen sub-groups (Fig. 4). The digital nomad communities and social platforms serve as key stakeholders that indirectly facilitate innovation. Digital nomadism offers opportunities to local stakeholders, who drive innovation and marketing by utilising social media and digital nomad platforms. Compared with tourists, digital nomads' needs require the provision of services from both international and local stakeholders. As digital nomads value connectivity, the involvement of international online platforms is important. These platforms provide professional and private services, collaboration with destinations, consultancy and marketing, and they participate in local investment and the management of digital nomad products.

4.4. The interplay between structural and agency-based innovation

The hierarchical relationships among major stakeholders and type of innovation are shown in Fig. 4. The darker the lines, the stronger the relationship. As the web content analysed was in English, collaborations at the local level may not be included and it is likely only larger scale partnerships and collaborations were reported. As digital nomads rely on the internet and web-technology to locate destinations and build communities, the digital nomad communities and online platforms were the most salient stakeholders in forming networks and collaborations. Co-working space operators, local travel business and services, and local accommodation and other basic-living services were closely linked with online digital nomad platforms. The digital nomad visas were linked to national ministries and authorities and to local travel business and services.

Marketing and campaign initiatives were the most common form of innovation, linking with multiple groups of stakeholders. For example, Airbnb partnered with the Caribbean Tourism Organisation (CTO) to promote Caribbean territories, such as the Virgin Islands, as a viable digital nomad destination. The Nomad X platform partnered with Portugal's Madeira Friends Association to launch a digital nomad village project to empower visitors with opportunities and access to local experiences.

In digital nomad destinations, the digital nomad visa as a structural innovation allows remote work markets to enter and reside within a destination. This provides an opportunity to utilise local destination resources and services. Structural innovation also provides business opportunities for international stakeholders to serve as a virtual agent between potential markets and the destination. Although the digital nomad visa schemes and requirements vary, the process brands the destination as a digital nomad destination and informs other stakeholders of potential opportunities. Structural innovation enables stakeholders to innovate and meet the needs of digital nomads. However, the limitations of nomad visas also restrain agency opportunities. Digital nomad visas are limited to those from developed countries. Financial requirements also set a threshold that may lead to inequalities and imbalances between digital nomads and local residents. Digital nomads face potential residency restrictions and are unable to earn income from within the destination. This may limit the potential for locally based entrepreneurship and investment. Bureaucratic procedures and processes related to visa applications also creates obstacles.



Fig. 3. Digital nomad needs and relevant stakeholders.



Fig. 4. Main hierarchical relationships between stakeholders and innovation (constructed based on network analysis).

Agency-based innovation was driven by the need to support the pandemic affected tourism economy and provided an opportunity to expand existing markets towards digital nomadism. As this a relatively new phenomenon, the innovative capacities of digital nomads are yet to be recognised and structural changes may potentially be enforced. In the context of digital nomad destination innovation, the relationship between structure and agency is generally aligned as the market grows.

5. Discussion

Based on a content analysis of web articles related to digital nomad destinations, this study identified the characteristics of the destinations and the agency-based and structural innovations within these destinations. A digital nomad destination builds upon a destination's existing tourism status. Digital nomad destinations tended to be developed after the height of a major crisis, such as the-pandemic that facilitated remote working, as a result of the *work from anywhere paradigm* established during the pandemic. Pre-pandemic, lifestyle mobility was exclusively exploited by freelance workers and entrepreneurs but remained a niche market in many destinations. Changes to the remote work policies within large corporations, therefore, are likely to determine the future of the digital nomad markets. Digital nomads contributed to increased

demand and occupancy within tourism destinations, by interplaying between structural and agency-based innovations (Borges et al., 2022). If this trend remains in the post-pandemic era it will determine the effectiveness of the various innovative strategies.

Characteristics of digital nomad destinations included travel and work aspects reflecting the digital nomad lifestyle. It was interesting to discover that inclusiveness was an important consideration for digital nomads. Inclusive tourism involves the provision of tourism for diversified markets, such as the disabled, aged (Darcy, McKercher, & Schweinsberg, 2020), and LGBTQ communities (Ram, Kama, Mizrachi, & Hall, 2019; Vongvisitsin & Wong, 2021). Destinations also used digital nomad visas and strong digital nomad communities to strengthen branding and present an attractive digital image. Destinations with an inclusive and sustainable destination image are more likely to maintain a competitive edge. Mostly the destinations were mature tourism destinations although there were several exceptions with digital nomad villages located within emerging destinations. Urban and resort destinations equipped with advanced infrastructure, service facilities, a natural environment, and lifestyle appeal, provided a basis for agency-based innovation. Smaller scale peripheral destinations required more development capital and investment (Garcez et al., 2022).

The digital nomad market is not homogenous; destination

requirements varied based on individual preferences and lifestyles. Different segments, such as: executive nomads, energy nomads, family nomads, and grey nomads also emerged within the web content. Work-related aspects distinguish digital nomads from regular tourists and define this group based on temporal, financial, and social needs, which also drives destination innovation. It is important for destinations to understand the digital nomad market to identify specific needs and the corresponding impacts. The potential for immigration may be attractive to nomads. However, most destinations limit the transition from a digital nomad status to a long-term resident. The study identified that destinations that were successfully branded as digital nomad destinations required increased collaboration and campaigns, driven by destination marketing organisations (DMOs) and other similar organisations. The role of DMOs is particularly salient at both the macro and micro levels and helps drive innovation (Melis et al., 2023).

This research established that innovation was driven by a need to address the impact of the pandemic. It created an opportunity to leverage the digital and remote working market. From a destination perspective, structural innovation related to visas and taxation were based on an understanding that digital nomads were tourists or temporary citizens by nature, although nomads may identify differently. Digital nomad visas were varied in their requirements and their efficiencies. The findings resonate with Sánchez-Vergara, Orel, and Capdevila (2023) and support the optimisation of bureaucratic procedures to eliminate barriers. The interplay between structure and agency in digital nomad destinations indicated that public-sector policy makers need to consider international and local stakeholders to realise a strategic fit with structural innovation (Aarstad, Ness, Haugland, & Kvitastein, 2018).

Attracting high-quality tourists has been associated with sustainability. Post-pandemic tourism recovery has seen destinations shift from activating underused tourist resources to managing tourism flows in a more sustainable way (Vujičić, Stankov, & Vasiljević, 2023). Innovation at the agency level that enables entrepreneurs, product and service providers, and other related organisations, will contribute to the development of new products and create a network between international and local stakeholders. Innovation at the agency level can encourage entrepreneurship and inclusiveness that may mitigate the potential negative impacts of digital nomadism.

6. Conclusion

6.1. Theoretical implications

This study identified the characteristics of, and innovation within, digital nomad destinations. The study also highlighted the drivers and consequences of digital nomadism on tourist destinations. The attractors of a destination are key to its appeal and play a vital role in the destination's competitiveness and success (Vinyals-Mirabent, 2019). This study discovered that the key attractors included: culture and history, nature and climate, infrastructure, work facilities, service amenities, economic/financial aspects, and social/political aspects. Agencies that are technology-oriented tend to be strong innovators, providing digital nomad services and were active in the diffusion process. However, structural actors are also important to drive digital nomadism at the institutional level. Theoretically, this study contributes to the diffusion of innovation theory, in terms of how ideas are spread, within destination research by combining the phenomenon of digital nomadism and an agency-structure perspective. The study consolidates the destination innovation framework and links the framework to different stakeholders and innovations. It provides an integrated approach through the analysis of web content related to digital nomad destinations and presents findings relevant to digital nomadism supply. Digital nomad destinations can be categorised into traditional destinations with mature tourist facilities and new, emerging destinations seeking development opportunities. Both destinations and various local and international stakeholders demonstrated structural and agency-based innovation strategies. Moreover, this study contributes methodologically by combining semantic content analysis and hierarchical network analysis to examine the digital nomad phenomenon through online web data. The methodological approach could be further applied to understand the diffusion of new travel types and destination innovative actions.

6.2. Practical and social implications

Practically, this study contributes to the management and marketing of tourist destinations that cater to the digital nomad markets. The study proposes best practices for digital nomad destinations based on stakeholder involvement and innovation. These practices include.

- a. Enhancement of technological infrastructure to provide portable internet connection, improve connection speeds, and increase accessibility to technological services;
- b. Development of smart space allocation, by encouraging the operation of commercial co-working spaces and the transformation of existing spaces and services within hotels and restaurants;
- c. The formation of digital nomad social communities, virtually and physically, with the construction of nomad villages and hubs;
- d. Collective digital nomad marketing by stressing the destination unique selling propositions and collaboration with digital nomad platforms; and
- e. Support the development of digital nomad visas, which provide legislative support and stipulate tax reduction/exemptions, to provide a clear message that brands the digital nomad destination.

While individuals may not persistently adhere to a digital nomadic lifestyle, influxes of young adults opting for a balanced approach between life and work continues. Subsequently, the scale and quantity of digital nomad communities around the world continues to grow (MBO Partners, 2023). Remote working opportunities are foundations for digital nomadism. The remote working trend is likely to continue with the advancement of information technology and tools for remote employee management. As remote work has been increasingly normalised, cyber security and employee surveillance have become a point of discussion to reduce the risks of remote working (Statista research department, 2023). In comparison to the pandemic period, the optimisation of national policies and economic recovery globally, empower digital nomads to exercise greater freedom when selecting destinations. These decisions are based on individual needs and the digital nomad community environment. Socially and politically, governments should continue to implement and refine measures such as digital nomad visas and tax policies to attract global digital nomads to sustainably manage their impacts on local residents.

6.3. Limitations and future research

This study is not without limitations. The sources of data may limit its generalisability and objectivity. As the media can be biased, the sites that directly cater to digital nomads may promote this form of lifestyle and DMOs may amplify the attractiveness of digital nomad destinations. The collaborations and relationships between the different levels of stakeholders may also be underestimated given the constraints of the online data. Although digital nomadism is a generally a western-centred phenomenon, articles in languages other than English may provide different perspectives. Table 9 presents an overall summary of destination attractors, innovation, and competitiveness that support digital nomadism based on this research and may provide future research agendas.

From the demand side, the dynamics of the digital nomad market and demand may also vary in different destinations. Future research could examine the heterogeneity of the digital nomad market and the impacts it would have to the competitiveness and prosperity of

Summary of destination competitiveness towards digital nomadism and future research agendas.

Demand of digital nomadism	Supply of digital no		
Digital nomad needs	Destination attractors	Destination innovations	Destination competitiveness
 Work Travel Financial Social Basic living 	 Culture & history Nature & climate Infrastructure & work facilities Service amenities Economic/ financial aspects Social/ political aspects 	 Digital nomad visas Tax policies Digital nomad products & services Destination marketing 	 Core resources and facilities Cost of living and lifestyle provisions Digital nomad oriented marketing and branding Innovation system Engagement of stakeholders
Future research ag	endas		
Heterogeneity of demand • Geo-economic characteristics of digital nomadism and its influence on destination selection • Market research on responsible behaviour and interactions with local communities • Mobility patterns and	 Connecting demand and supply Impact of digital nomads on destinations Influence of long-term and short-term involvement Mobilisation of local and global resources through digital nomadism 	 Agency capacity in innovation Case studies of destinations at a micro level Digital nomadism related entrepreneurship Evaluation of performance and innovation outcomes 	Institutional participation and support • Changes to remote work policies and practices • Nuances and diversified practices of digital nomad visas and taxation policies as important structural innovations

destinations. Future research that focuses on the geo-economic characteristics of digital nomadism and its influence on destination selection will be helpful. Destinations may perceive the digital nomads as homogenised, high-income, freelance workers who are more mindful of responsible behaviour and enjoy interaction with local communities. However, this perception requires further clarification through market research. To connect demand and supply, understanding the impact of digital nomads on destinations also require more research and greater consideration. The long-term involvement of digital nomads may not have the anticipated positive impacts and in fact can develop different challenges such as local exploitation and gentrification draining resources. Mobility patterns and the length of stay of the digital nomad may influence how they interact and impact on a destination. From a structure-agency perspective, the innovative capacity of agencies, such as businesses and entrepreneurs, could be further examined. Institutional influences will continue to determine the future of digital nomadism. Future research should link with studies in remote work to understand the market needs (Rainoldi et al., 2022a, 2022b) and also incorporate multiple case studies to examine destination innovation from a micro perspective. Depending on the remote work movement, openness and continuity of the remote work policies, the growth or de-growth of the remote work population will determine the future of digital nomad destinations. The nuances and diversified practices of digital nomad visas and taxation policies as important structural innovation may also be examined via case studies.

CRediT authorship contribution statement

Lingxu Zhou: Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Writing - original draft, Writing - review & editing. Dimitrios Buhalis: Conceptualization, Investigation, Supervision, Validation, Writing - review & editing. Daisy X.F. Fan: Data curation, Formal analysis, Investigation, Methodology, Supervision, Writing - original draft, Writing - review & editing. Adele Ladkin: Conceptualization, Data curation, Investigation, Methodology, Supervision, Validation, Writing - review & editing. Tata curation, Formal analysis, Methodology, Project administration, Writing - original draft.

Data availability

Data will be made available on request.

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