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The "New Normal" in the (Post-)Viral Tourism: The Role of Technology

Abstract

This study explores the elements of the 'New Normal' in the (post-)viral tourism and assesses the role of technology. The 'New Normal' of (post-)viral tourism includes supply-related elements (operations, marketing, and finance and strategic management) and demand-related aspects (psychological issues and travel behaviour). Companies would need to reorganise their business processes, while technology is expected to play a major role in the 'New Normal' world. Theoretical, managerial, and policy implications are also provided.

Keywords: New Normal, role of technology, (post-)viral tourism, travel behaviour, COVID-19

1. Introduction

Since the beginning of 2020, the COVID-19 pandemic has negatively affected the world economically (Donthu & Gustafsson, 2020). This situation harms many sectors, especially tourism and hospitality (Gössling et al., 2021). For instance, according to World Tourism Organization (UNWTO, 2020a), because of the pandemic, international tourist arrivals declined by 72% in the first ten months of 2020 compared to the same period of 2019. This is a likely result because travelling was considered a high-risk activity (Zheng et al., 2021), and various measures (e.g. closing borders, hotels, restaurants, and other tourism and hospitality companies, flight restrictions) were imposed to prevent people from the virus infection (Altuntas & Gok, 2021).

The pandemic causes fear among people. Travellers become more conscious about safety and security issues, and accordingly, their behaviour is likely to change (Wen et al., 2020). Tourism and hospitality industry firms should meet consumers' demand for success in the (post-)viral world (Seyitoğlu & Ivanov, 2020a). In this aspect, as the World Health Organisation (2021) strongly recommends, physical distancing and disinfection are the most efficient ways of preventing the spread of the virus. Thus, tourism and hospitality firms should ensure travellers' health and safety by providing physically distance service and disinfection.

With the current pandemic, the term 'New Normal' used by many governments, journalists and industry representatives gained popularity recently. The 'New Normal' is defined as the willingness of people to follow the new regulations and rules for long periods in urgent times for the sake of themselves and the public (Dewi, 2020). The elements of the 'New Normal' can also be peoples' own decisions such as changing their behaviour (e.g. avoiding crowds, not travelling, not eating in indoor public restaurants). Also, there are obligatory rules such as wearing masks in public and while travelling, hand-sanitising, and social distancing as elements of the 'New Normal' in the (post-)viral world (Rahimizhian & Irani, 2020). However, in terms of the tourism and hospitality industry, there are no clear answers about what are the elements of the 'New Normal' and for how long some or all these elements will last.

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The most obvious thing in the current pandemic is that people are adopting technology more than ever (Rahimizhian & Irani, 2020) to continue their life healthily and securely. Technology has been playing a crucial role in the current pandemic as an element of the 'New Normal'. For example, robots have been used to provide physically distant services for cleaning and delivering food and medicine (Seyitoğlu & Ivanov, 2020a, 2020b).

Additionally, since it has the potential to change consumers' behaviour, the current pandemic may also change the structure of industries as people are living in the 'New Normal' environment. For instance, to decrease the spread of the virus, most employees from various industries have started to work remotely without offices via information technology tools (Barnes, 2020). Tourism and hospitality firms have also started to benefit from technology to provide safer services and decrease the health risks for travellers (Shin & Kang, 2020). Technological tools such as electrostatic sprayers, cleaning robots, ultraviolet light technology, delivery drones have already started to be used by some tourism and hospitality firms (Garcia, 2020; Shin & Kang, 2020).

To sum up, the latest studies state that the current pandemic reveals the significance and crucial role of technological tools, especially robots, for tourism and hospitality firms (Gretzel et al., 2020; Ivanov et al., 2020; Seyitoğlu & Ivanov, 2020a, 2020b; Sigala, 2020; Trunfio & Pasquinelli, 2021). However, a more detailed study about the role of technology in terms of meeting the elements of the 'New Normal' in the (post-)viral tourism does not exist yet in the current literature. Therefore, adopting an exploratory qualitative approach, this study seeks to determine the elements of the 'New Normal' of (post-)viral tourism and the role of technology in this aspect. Thus, the aims of this study:

- Aim 1: To identify the elements of the 'New Normal' in the (post-)viral world in terms of tourism suppliers and travellers;
- Aim 2: To critically assess the role of technology in the elements of the 'New Normal' in tourism and hospitality.

2. Literature review

2.1. Viral epidemics, pandemics and tourism

The most devastating pandemic in modern history was the Spanish Flu of 1918, which was caused by a virus and ended millions of lives (Islam et al., 2020). More recent was the SARS viral epidemic of 2003. Later in 2009, the influenza A(H1N1) led to another pandemic, and in 2014 there was the Ebola epidemic in West Africa. Such epidemics and pandemics have significant social and economic effects on communities (Hall, 2011; Hanrahan & Melly, 2019; Maphanga & Henama, 2019; Peters et al., 2020). For instance, more than 3 million tourism employees lost their jobs in 2003 due to SARS (Zheng et al., 2021). It cost €15 billion to China's tourism industry (Hanrahan & Melly, 2019). SARS also influenced tourists' choices and behaviour (e.g. outdoor events became more popular, rural areas were attractive for tourists) (Wen et al., 2005). Additionally, studies find that post-pandemic tourist behaviour mostly tends to touchless tourism services (Rahimizhian & Irani, 2020) because tourists are more sensitive to protecting their health (Hartjes et al., 2009; El-Ghitany et al., 2018).

As a whole, tourism is one of the most vulnerable industries to be affected by such pandemics, and the industry's recovery is generally slow (Novelli et al., 2018). The main problem is that epidemics result in a high-risk perception of tourists, and this negative perception may be an obstacle to travel. Thus, even after these outbreaks end, travellers may also be sensitive to safety issues for a long period (Shin & Kang, 2020). For example, after almost three years of the Ebola outbreak, international tourists' arrivals were still 50% less than before the epidemic (Zheng et al., 2021). Additionally, a sudden drop in tourist demand during an epidemic depletes the financial resources of tourist companies, decreases their liquidity, and threatens them with default (Ivanov et al., 2020).

The current COVID-19 pandemic hit the tourism and hospitality industry hard as there have been lockdowns and closed borders across the world since its beginning. UNWTO (2020a) states that for the first ten months of

2020, the number of international tourists decreased by 72% (that is, lost revenues of around US$ 935 billion) than the year before. The impact of COVID-19 on the tourism industry is the most devastating one compared to previous pandemics, and the negative influence continues (Škare et al., 2020). Generally, pandemics have negatively influenced the tourism industry for a long time, but the current pandemic's effect can have even longer impacts on the economy and tourism industry (Škare et al., 2020). Thus, the tourism and hospitality firms have been searching and working on solutions to minimise the damage and survive in the market.

On the demand side, consumers are worried about their health and safety because of the fear of infection (Awan et al., 2021). For the supply side, it is vital to meet these customer expectations and reengineer their operations and structures to survive and remain competitive in the tourism market in the (post-)viral world (Seyitoğlu & Ivanov, 2020a). In this regard, hygiene and safety protocols (some of them imposed by governments) gain significance for the operations of tourism and hospitality companies. They need to provide a healthy and risk-free service to travellers; hence, cleaning, disinfection, and physical distancing should be priorities. Thus, for both sides (demand and supply), there might be dramatic changes recently named 'New Normal'. However, the elements of the 'New Normal' and the role of technology among these elements have not been empirically investigated yet.

2.2. Technologies in tourism and hospitality

Tourism and hospitality companies use a wide variety of technologies - from analogue technologies such as kitchen equipment, through common information technologies such as websites, chatbots, mobile applications, reservation systems, self-service kiosks, and social media, to more advanced technologies such as robots, drones, artificial intelligence, virtual and augmented reality, and Internet of things, to mention just a few examples (Sigala & Gretzel, 2018; Benckendorff et al., 2019; Israel et al., 2019; Ivanov & Webster, 2019; Yung & Khoo-Lattimore, 2019; Thees et al., 2020; Tussyadiah, 2020; Rastegar et al., 2021).

Technology has a strategic role in the tourism and hospitality industry. It allows companies to create and maintain a sustainable competitive advantage by improving the business processes in the organisation - marketing, operations, human resource management, and financial management. From a marketing perspective, technologies are beneficial to enhance marketing communications, distribution strategies, and experience design in tourism and hospitality firms (Neuhofer et al., 2014; Benckendorff et al., 2019; Seyitoğlu & Ivanov, 2020a). From an operations perspective, technologies allow companies to increase productivity, efficiency and a company's capacity to serve more travellers with a limited number of employees in a shorter time (Ivanov & Webster, 2018). From a human resource management perspective, technologies enhance employees by improving their productivity. However, technologies, especially automation technologies, can have a strong substitution effect and replace human employees (Ivanov, 2020). From a financial perspective, digital technology is vital to managing the revenue of tourism and hospitality firms (Alrawadieh et al., 2021). Moreover, automation technologies, such as robots, self-service kiosks and artificial intelligence, have the potential to improve the financial performance of firms by decreasing their operational costs (Ivanov et al., 2020). From an information management perspective, information technologies allow tourism and hospitality companies to develop, manage and utilise large datasets (big data) about their customers, employees, competitors, operations, financial metrics, macroenvironmental factors, etc., thus supporting managers in the decision-making process (Li et al., 2018). From the viewpoint of the customer, (digital) technologies facilitate the trip planning, the transportation to, from and within the destination, the communication with the service providers, the use of various services during the trip (e.g. accommodation, F&B, guiding, cultural services, etc.), pay, and share their experiences on social media (Benckendorff et al., 2019). Moreover, automation technologies increase the role of the customers in the service delivery process and transform them into prosumers.

The current pandemic may increase the importance of technology; especially robotic technology can play a strategic role for tourism and hospitality firms in the (post-)viral world (Gretzel et al., 2020; Sigala, 2020).

Technological tools such as germicidal ultraviolet (UV) lighting systems (Apongol, 2020; World Travel & Tourism Council, 2020b) and cleaning robot systems (e.g. germ-zapping robots) may be useful to decrease the infection risks. In this aspect, so far, technological tools such as service robots (Seyitoğlu & Ivanov, 2020b) have benefited some of the tourism and hospitality suppliers to provide safe, physically distant service. Even before the pandemic, tourism and hospitality firms were using robotic technology for various tasks such as serving and hosting, cleaning, providing information, room service, and entertaining in different service contexts such as hotels, restaurants, bars, airports, museums, etc. (Chan & Tung, 2019; Ivanov & Webster, 2019). Besides robotics, other touchless technologies (e.g. biometrics, QR codes, infrared sensors, contactless check-in/out kiosks, movement detectors, voice-activated devices, etc.) may also increase in importance to minimise physical contact and the risk of infection.

3. Methodology

Adopting an exploratory qualitative approach, this study was designed to enlighten the content of the 'New Normal' of (post-)viral tourism based on document analysis. Document analysis is a systematic procedure of reviewing and evaluating printed or web-based materials (Bowen, 2009). Keywords such as 'New Normal for tourism', 'New Normal for hospitality', 'New Normal trends for tourism and hospitality industry', and 'Covid-19 and tourism' were used to search for related publications on Web of Science and Scopus - the two largest databases with academic publications. Moreover, web-based search engines such as Google and Google Scholar were used to benefit from media sources (e.g. blog articles, newspaper articles, and reports). In the end, the documents of the present research consist of 28 web-based documents and 15 academic articles (43 documents in total, presented in Appendices 1, 2, and 3). The data were analysed through content analysis which is a systematic approach to analysing texts for targeted purposes (Bernard & Ryan, 2010). The categories and sub-categories were identified and agreed upon by the authors.

4. Findings

According to the content analysis of gathered documents, two main domains are extracted: supply-related aspects and demand-related aspects. Each domain has different groups, subgroups, and related elements (see Table 1).

Table 1
The dimensions of the 'New Normal' in tourism and hospitality

Domains	Groups	Subgroups	Elements of the 'New Normal' in tourism and hospitality	
			Elements	**The role of technology**
Supply-related aspects	**Operations**	Cleaning and disinfection	✓ extra cleaning and hygiene measures ✓ a special cleaning and disinfection plan ✓ new certifications, accreditations and quality standards on hygiene ✓ coordination with health measures ✓ a designated hygiene and safety management ✓ food safety in restaurants - new food preparation and serving protocols ✓ protocols and guidelines for staff safety and health	✓ electrostatic sprayers ✓ high-efficiency particulate air (HEPA) filter system ✓ germicidal ultraviolet (UV) lighting system ✓ advanced HVAC [heating, ventilation, and air conditioning systems] ✓ cleaning robot systems (e.g. germ-zapping robots) ✓ drones (spraying disinfectants)
		Physical distance	✓ table spacing in cafes and restaurants ✓ preventing bar guests from close contact ✓ add floor markings and signage ✓ limited people per table or only allowing family members to dine together ✓ more space in aeroplanes ✓ fewer people in transportation tools (e.g. planes, buses, trains)	✓ robots for a physically distant service ✓ distance and crowding control technologies ✓ drone delivery ✓ digital key systems-mobile room keys ✓ digital (electronic) health passports ✓ digital identity controls ✓ in-app ordering ✓ self-service kiosks

Table 1 ***(continued)***

Supply-related aspects	**Marketing**		✓ flexibility to the customer-e.g. flexible cancellation and rebooking policies ✓ transparency in marketing (e.g. clear communication with hotel guests) ✓ knowing the customer demands - meet trends in demand ✓ tourism programmes in small groups on a reservation basis	✓ digital marketing ✓ robots ✓ self-service kiosks
	Finance and strategic management		✓ creation of a financial contingency plan ✓ investment in innovative technology ✓ develop scenario analysis ✓ a crisis management team ✓ action plans	✓ automation of processes to decrease fixed costs
	Psychological issues		✓ fear and anxiety ✓ neophobia ✓ xenophobia	
Demand-related aspects	**Travel behaviour**	General travel behaviour	✓ health and safety as a priority ✓ using protective equipment such as masks and disinfections ✓ avoidance of crowd and overpopulated destinations ✓ solo travel ✓ private vehicles rather than public vehicles such as aeroplanes, trains or buses ✓ prefer to spend more time in hotels rather than going around ✓ shorter holidays ✓ more personalised (contactless) service-untact tourism ✓ low-risk environments ✓ a shift in tourist behaviour away from far-distant destinations to domestic ones ✓ ethnocentrism-ethnocentric behaviours ✓ considering sustainability	✓ virtual events/virtual tourism ✓ augmented reality ✓ in-room voice controls for a light switch or TV remote ✓ electronic minibars ✓ detecting or measuring body temperature ✓ face recognition systems ✓ digital key systems-mobile room keys ✓ digital (electronic) health passports ✓ digital identity controls ✓ in-app ordering ✓ self-service kiosks ✓ robots for a physically distant service ✓ drone delivery
		Behaviour related to food and beverages (F&B)	✓ avoidance of exotic/wild animal meat ✓ a tendency for more organic and healthy items ✓ avoidance from the buffet service ✓ demand for room service ✓ demand for take-out items	

4.1. Supply-related aspects

Operations (sub-groups: cleaning and disinfection, and physical distance), marketing, and finance and strategic management are the main groups of the supply-related aspects domain.

4.1.1. Operations

Considering operations, two subgroups ('cleaning and disinfection' and 'physical distancing') have emerged. Tourism suppliers need to continue their operations to survive in the market. Thus, it is important to ensure the health of both customers and employees to provide services in the pandemic world. Accordingly, cleaning and disinfection (Shin & Kang, 2020) and physical distancing (Seyitoğlu & Ivanov, 2020a) are accepted as main issues to preclude virus transmission in the tourism and hospitality context.

Cleaning and disinfection

As one of the subgroups of tourism operations, cleaning and disinfection have several related elements such as extra cleaning and hygiene measures (Gil-Alana & Poza, 2020), a special cleaning and disinfection plan (World Travel & Tourism Council, 2020a), new certifications, accreditations and quality standards on hygiene (Kamleshwaran, 2020), coordination with health measures (Adebayo, 2020; Guha, 2020), a designated

hygiene and safety management (Apongol, 2020; Wen et al., 2020), food safety in restaurants - new food preparation and serving protocols (Filimonau et al., 2020), and protocols and guidelines for staff safety and health (World Travel & Tourism Council, 2020a; Organisation for Economic Co-operation and Development [OECD], 2020). These elements are associated with the safety and security of both customers and employees of tourism service providers in the post-viral world.

Tourism and hospitality service providers need to consider cleaning and disinfection as a priority to continue their operations. According to data analysis, service providers should have extra cleaning and hygiene measures (Gil-Alana & Poza, 2020) to assure their customers' health and safety. This may be possible with a special cleaning and disinfection plan (World Travel & Tourism Council, 2020a) in their operations. Moreover, involving certifications, accreditations, and quality standards on hygiene would be normal in the (post-)pandemic world (Kamleshwaran, 2020) to be more reliable in the market. On the other hand, coordination with health measures at destinations (Guha, 2020) may enable a healthier tourism activity in the post-viral world.

To succeed in cleaning and disinfection, a designated hygiene and safety management (Apongol, 2020) that is led by a manager may be considered in the tourism businesses. Accordingly, food safety in tourism and hospitality operations is a critical element of cleaning and disinfection, especially for restaurants. Additionally, food and beverages are crucial for travellers and influence their destination choice (Seyitoğlu, 2020). Therefore, cleanliness and food quality standards are critical issues that need to be managed well to convince tourists in the (port-)pandemic world (Wen et al., 2020).

Since people cannot use masks while eating, new food preparation and serving protocols might be the right choice to maintain travellers' health (Filimonau et al., 2020). Moreover, pre-packed food, sanitised food (Guha, 2020; Wen et al., 2020), avoiding guests touching food at buffets, queue management and detailed cleaning (World Travel & Tourism Council, 2020a) may be some of the good options to keep customers safe.

Tourism suppliers are not only responsible for guests' health but also need to prevent the health of their staff. Therefore, protocols and guidelines for staff safety and health are undoubtedly required for operations' sustainability (World Travel & Tourism Council, 2020a).

The role of technology in terms of cleaning and disinfection

The document analysis shows that there are several technology-related elements of cleaning and disinfection, such as electrostatic sprayers (Apongol, 2020; Garcia, 2020; Kamleshwaran, 2020; World Travel & Tourism Council, 2020b), high-efficiency particulate air (HEPA) filter system (Apongol, 2020; World Travel & Tourism Council, 2020b), germicidal ultraviolet (UV) lighting system (Apongol, 2020; World Travel & Tourism Council, 2020b), advanced HVAC [heating, ventilation, and air conditioning systems] (Shin & Kang, 2020), cleaning robot systems (e.g. germ-zapping robots) (Shin & Kang, 2020), and drones (spraying disinfectants) (FINN, 2020). These elements are helpful for suppliers to overcome the cleaning and disinfection issues in the post-viral world.

Utilising technology is seen as a smart strategy to decrease health risks for customers and employers in terms of the tourism industry (Shin & Kang, 2020). Some of the hotels around the world are already adopting technological tools such as cleaning robots, electrostatic sprayers, ultraviolet-light technology for advanced cleaning and disinfection to reduce the risk of infections (Garcia, 2020; Shin & Kang, 2020).

Physical distance

The second subgroup of operations management, physical distance, contains some related elements and the role of technology in terms of these elements as well. To ensure physical distancing as an element of 'New Normal', some practices should be implemented by tourism and hospitality companies, such as table spacing in cafes and restaurants (Atack, 2020; World Travel & Tourism Council, 2020a), preventing bar guests from close contact (Hong Leong Bank [HLB], 2020), adding floor markings and signage (HLB, 2020), limited

people per table or only allowing family members to dine together (ASAI Hotels, 2020), more space in aeroplanes (Guha, 2020), and fewer people in vehicles (e.g. planes, buses, trains) (Dewi, 2020). These practices are some examples that service providers should consider in their operations.

The role of technology in terms of physical distance

The results indicate that technology plays an important role in terms of providing physical distance as well. Robots-based physically distant service (Assaf & Scuderi, 2020; Seyitoğlu & Ivanov, 2020a; Seyitoğlu & Ivanov, 2020b; Shin & Kang, 2020; Sigala, 2020), distance and crowding control technologies (Sigala, 2020), drones for delivery (FINN, 2020), digital key systems/mobile room keys (Rahimizhian & Irani, 2020; Shin & Kang, 2020; Thadani & Sharma, 2020), digital (electronic) passports (Sigala, 2020; Swanger, 2020), digital identity controls (Sigala, 2020), in-app ordering (Rahimizhian & Irani, 2020), and self-service kiosks (Echecopar, 2020; Thadani & Sharma, 2020) are the technology-related elements that are revealed from the data analysis. Tourism companies may benefit from a robotic service system (Seyitoğlu & Ivanov, 2020a) and use robots for room service, food delivery, and other tasks to enable physical distancing (Seyitoğlu & Ivanov, 2020b) in the (post-)pandemic world. It is stressed in the documents that technology would play more role in our lives in the post-viral world. For instance, (FINN (2020) states that: *"Drones are and will become more and more part of our daily life. Police are using them, engineers use them for inspection of the infrastructure; ports, and ships entering them, are also being monitored... The New Normal will undoubtedly have the unmanned drone at its centre - thanks to one small virus particle"*.

According to other documents (Assaf & Scuderi, 2020; Shin & Kang, 2020), the tourism industry needs to prove that they provide safe service via robotic and similar technological solutions (contactless check-in and check-out systems via kiosks, digital key systems-mobile room keys, face recognition systems) that are ensuring distancing. Moreover, these technological tools would be widely used to decrease the contact between people and thus prevent viral infections.

4.1.2. Marketing

The document analysis shows that as one of the supply-related aspects, marketing differs from the pre-virus period and has shifted to a different direction in the 'New Normal'. The 'New Normal' in the post-viral world would include marketing elements such as flexible cancellation and rebooking policies (Gil-Alana & Poza, 2020; Soria, 2020), transparency in marketing (e.g. clear communication with hotel guests) (International Hotel and Tourism Training Institute [IHTTI], 2020), knowing the customer demands and meet trends in demand (Henley, 2020; Seyitoğlu & Ivanov, 2020a), and tourism programs in small groups on a reservation basis (Bae & Chang, 2020).

Since the situation can change at any time during a pandemic, companies' policies should adapt to these unforeseen changes (Soria, 2020). For instance, by providing flexibility to customers, tourism and hospitality establishments may be more reliable to their customers because people are worried when purchasing or booking a tourism service due to the sudden possible restrictions. This may seem like a one-sided advantage, but it may be more advantageous than not operating or selling products or services. On the other hand, marketing transparency related to building trust in the market (IHTTI, 2020) was also a critical factor before the pandemic. Moreover, learning about customer demand is another key tool for successful tourism marketing. Knowing the expectations from the demand side would also enable suppliers to meet them.

Since safety and health is the primary issue that consumers care about, marketing efforts should be based on tourism trips in small groups on a reservation basis (Bae & Chang, 2020). Moreover, more personalised service in tourism may be both safe and attractive in the pandemic era. Furthermore, once largely hidden from tourists' sight, cleaning and disinfection may become a visible part of the product to provide physical evidence of the company's activities and assure tourists about the hygiene and safety of the hospitality facilities.

The role of technology in terms of marketing

As consumers, in general, became more involved with technology during the pandemic, digital marketing increased its importance (Thadani & Sharma, 2020). Not many people would prefer to use traditional brick-and-mortar travel agencies for booking; instead, even more, travellers will use digital platforms (OTAs) to book and purchase tourism services in the post-viral world than before the pandemic (Khanal, 2020). Another role of technology in the field of marketing will be the inclusion of robots (Seyitoğlu & Ivanov, 2020a; 2020b), self-service kiosks (Echecopar, 2020; Thadani & Sharma, 2020), and other similar touchless technologies in communication messages to customers to assure target audience about the sanitary measures taken by tourism and hospitality companies to minimise the risks of viral infections.

4.1.3. Finance and strategic management

The elements related to finance and strategic management as parts of the 'New Normal' identified in the literature are the creation of a financial contingency plan (Henley, 2020), investment in innovative technology (Soria, 2020), scenario analysis (Henley, 2020), a crisis management team and action plans (Apongol, 2020).

For the tourism suppliers considering finance, the creation of a financial contingency plan (Henley, 2020) and investment in innovative technology (Soria, 2020) were revealed as important elements of the 'New Normal' in the post-viral world. The current pandemic has shown that suppliers should be prepared financially for this kind of crisis and damages because the lockdowns and closing of the businesses have caused financial losses, making it hard to stay in the industry. The suggestion related to the financial contingency plan is to conserve cash and redirect this cash to new priorities that are considered significant for the future of the firm(s) (Henley, 2020).

On the other hand, developing scenario analysis that considers a change of use or business model to meet trends in demand in the post-viral world (Henley, 2020), creating a crisis management team in response to the threat of any infectious diseases, and action plans considering the recommendations of local and national public health authorities (Apongol, 2020), are significant elements related to strategic management.

The role of technology in terms of finance and strategic management

Ivanov et al. (2020) developed a conceptual framework of the role of automation technology for mitigating the negative impacts of biosecurity threats on the economic performance of tourism and hospitality companies. In the context of (post-)viral tourism, the use of automation technologies may be an element of the 'New Normal'. They decrease the fixed costs and cash outflows of tourism and hospitality companies, allow companies to work with fewer employees, and improve their economic resilience to biosecurity threats. In that sense, automation technologies provide a strategic advantage to tourism and hospitality companies that use them compared to companies with no or low levels of automation.

4.2. Demand-related aspects

Psychological issues and travel behaviour are the main groups of the demand-related aspects domain.

4.2.1. Psychological issues

Since the start of the pandemic, more than 4.7 million people have lost their lives around the world so far (WHO, 2021). Moreover, the efforts of governments to prevent infections and more deaths around the world resulted in strict precautions and quarantines. Thus, people are more concerned about their health and lives. This situation caused a high level of fear and anxiety (Awan et al., 2021) which are the main psychological obstacles for tourists in the viral world (Zheng et al., 2021). Fear may lead to increased anxiety, and accordingly, the risk perception of tourists are likely to increase too. When people have a high-risk perception towards a specific destination, they may not feel safe and secure and not travel to that destination.

Neophobia and xenophobia are other crucial psychological restraints for tourists in the viral world (Zenker & Kock, 2020). Neophobia is defined as "extreme or irrational fear or dislike of anything new or unfamiliar" (Oxford-Lexico, 2020). Thus, due to neophobia, the motivation of travellers towards new things may decrease, and therefore they may avoid unknown things during their trips (Zenker & Kock, 2020). On the other hand, the term xenophobia is defined as "dislike of or prejudice against people from other countries" (Oxford-Lexico, 2020). Xenophobic perception may lead tourists to be in favour of less foreign travel, avoidance of ethnic cuisine, more group travel, and purchase of travel insurance (Zenker & Kock, 2020).

4.2.2. Travel behaviour

The current pandemic is undoubtedly affecting people psychologically. Therefore, it is likely that people may have different behaviours in the pandemic world. The recent literature also states that the current pandemic may change the travel behaviour of tourists because pathogenic threats generally result in behavioural changes in the communities (Zenker & Kock, 2020). Thus, the coronavirus may significantly reshape tourist behaviour, which can be effective for a long time in the post-viral world.

According to the document analysis of the present study, in the post-viral world as part of New Normal, travel behaviours includes two subgroups: 'general travel behaviour' and 'behaviour related Food and Beverages (F&B)'.

General travel behaviour

According to the obtained documents, the general behaviour of travellers includes as parts of the in the 'New Normal' in the viral or post-viral world the elements: health and safety as priority (Awan et al., 2021; Dewi, 2020; DinarStandard, 2020; Eapen, 2020; Soria, 2020; Ivanova et al., 2021), using protective equipment such as masks and disinfections (Apongol, 2020; BBC-travel, 2020; Carbonaro, 2020; World Travel & Tourism Council, 2020b), avoidance of crowd and overpopulated destinations (Apongol, 2020; Awan et al., 2021; Guha, 2020; Wen et al., 2020; Zenker & Kock, 2020), solo travel (Dewi, 2020), private vehicles rather than public vehicles such as airplanes, trains or buses (Dewi, 2020; Li et al., 2020; Ivanova et al., 2021), prefer to spend more time in hotels rather than going around (Bwhotelier, 2020; Dewi, 2020; Guha, 2020), shorter holidays (Li et al., 2020), more personalised (contactless) service-untact tourism (Awan et al., 2021; Bae & Chang, 2020; Bwhotelier, 2020; Ocampo, 2020), low-risk environments (Guha, 2020; Ocampo, 2020), ethnocentrism-ethnocentric behaviour (Zenker & Kock, 2020), a shift in tourist preference from distant destinations to domestic ones (Bwhotelier, 2020; DinarStandard, 2020; Guha, 2020; Zenker & Kock, 2020), and considering sustainability (Charlotte, 2020; DinarStandard, 2020; Eapen, 2020; Zenker & Kock, 2020).

Since people are losing their lives because of Covid-19, health and safety are likely to be placed as a priority element in terms of travel behaviours (Awan et al., 2021). This is supported by the latest research (Ivanova et al., 2021), which revealed that safety would be a key factor when choosing a destination. Therefore, using protective equipment such as masks and disinfections are considered beneficial tools to stay safe while travelling (Apongol, 2020).

Pathogen threats are likely to result in the behaviour of avoiding crowdedness among travellers (Wang & Ackerman, 2019). Thus, on the one hand, the current pandemic may create a negative perception towards overpopulated and mass-tourism destinations; on the other hand, the traveller behaviours may be in favour of less populated destinations (Awan et al., 2021; Wen et al., 2020; Zenker & Kock, 2020). Some of the statements from the related documents include:

> *"Travelers will likely be drawn to less crowded places, more off-the-beaten paths, closer to nature and exclusive experiences".* (Apongol, 2020)
>
> *"Hotels and restaurants will face the same challenge - tourists will probably feel safer in boutique resorts and less crowded accommodations".* (Guha, 2020)

As people avoid crowdedness, solo travel may be popular in the post-viral world as part of the 'New Normal' (Dewi, 2020). Moreover, travellers may prefer the use of individual transportation instead of mass transportation (Li et al., 2020; Ivanova et al., 2021), especially for domestic travel because it is less risky as they can keep their physical distance. Additionally, as travellers are more cautious and seek safety, they may be willing to spend most of their time staying in their hotels while travelling (Bwhotelier, 2020; Dewi, 2020; Guha, 2020).

One of the further negative impacts of Covid-19 on the tourism industry for some tourists can be short holiday plans (Li et al., 2020). Moreover, as safety is a priority in the 'New Normal' world, there might be a high demand for more personalised (contactless) service-untact tourism because it implies a safe travel experience (Bae & Chang, 2020). Since minimised direct contact between service providers and travellers may reduce the infection risk, untact tourism services may be popular. The document analysis also shows that a low-risk environment will attract traveller's (Ocampo, 2020) because people might be risk-free in the 'New Normal' world.

Cashdan and Steele (2013) state that when people are exposed to a disease, they are more prone to be collectivist. Thus, COVID-19 may cause the travellers' ethnocentric behaviour in the 'New Normal' world (Zenker & Kock, 2020). Thus, people may want to contribute to their countries first. Furthermore, there might be a shift in tourist behaviour more from international travel to domestic tourism (Zenker & Kock, 2020). For instance, Guha (2020) mentions that *"Leisure travellers will prefer destinations that can be reached easily by automobile, train or shorter flights, a report said. Domestic travel…will gain popularity at a time when people increasingly want to bring down physical contact with others"*. Moreover, other two documents stressed that:

> *"The share of domestic travel will continue to rise beyond the COVID-19 crisis".* (DinarStandard, 2020)
>
> *"International outbound is not there and it is going to boost the domestic travel up with travelers looking for an escape after months of lockdown". (Bwhotelier, 2020)*

Finally, the findings show that sustainability might be a critical element in travellers' behaviour in the 'New Normal' world (Zenker & Kock, 2020). Since the negative effects of the current pandemic have shown people that sustainability is an important aspect to prevent diseases and be ready for a crisis, the number of sustainable travel segments may increase (DinarStandard, 2020), and responsible tourism becomes more significant (Eapen, 2020). One of the statements related to sustainable behaviour is:

> *"… as more travelers see the need for sustainability… they'll gravitate this way. Going by CO2 emissions per passenger, the environmental impact of train travel is significantly dwarfed by that of flying. Moreover, the eco-friendliness of an electric car cannot be denied. Depending on how the electric power is produced, this kind of vehicle can be fully run on renewable, sustainable resources, which is amazing".* (Charlotte, 2020)

Behaviour related to food and beverages (F&B)

The content analysis shows that the behaviour of travellers related to food and beverages consists of avoidance of exotic/wild animal meat (Angelini, 2020), the tendency for more organic and healthy items (Angelini, 2020), avoidance of buffet service (Assaf & Scuderi, 2020; Guha, 2020), demand for room service (Angelini, 2020; Assaf & Scuderi, 2020; Bae & Chang, 2020), and demand for take-out items (Angelini, 2020; Wen et al., 2020).

As the psychological issues of fear, neophobia and xenophobia are considered as main obstacles in the 'New Normal' world, travellers may have negative perceptions towards consuming exotic/wild animal meat (Angelini, 2020) when they travel. Thus, their behaviour may be in favour of more organic and healthy items (Angelini, 2020). Moreover, as they may cause more crowdedness and the risk of infection, buffet service may be avoided and might not be attractive anymore (Guha, 2020; Assaf & Scuderi, 2020). In one of the documents (Guha, 2020), the related idea is stated as *"one of the radical changes the pandemic will bring about will be in the eating and drinking habit of tourists. The "open buffet" concept, which was until recently quite popular*

in Turkey, might lose its charm as people will no longer want to take their food with same equipment and utensils that several others have used". Therefore, the demand for room service may increase in the 'New Normal' world because guests would prefer privacy (Angelini, 2020). Furthermore, since consumers may avoid eating indoors, food-related tourism service providers such as private restaurants and hotel restaurants should provide take-out choices (Wen et al., 2020).

The role of technology in terms of travel behaviours

As travel behaviour is expected to change, technology may play a critical role to provide some solutions to travellers' concerns through virtual events/virtual tourism (BBC-travel, 2020; Dewi, 2020; Kamleshwaran, 2020; UNWTO, 2020b), augmented reality (UNWTO, 2020b), in-room voice controls for a light switch or TV remote (Awan et al., 2021), electronic minibars (Thadani & Sharma, 2020), detecting or measuring body temperature (Sigala, 2020), face recognition systems (Shin & Kang, 2020), digital key systems-mobile room keys (Rahimizhian & Irani, 2020; Shin & Kang, 2020; Thadani & Sharma, 2020), digital (electronic) health passports (Sigala, 2020; Swanger, 2020), digital identity controls (Sigala, 2020), in-app ordering (Rahimizhian & Irani, 2020), self-service kiosks (Echecopar, 2020; Thadani & Sharma, 2020), robots-physically distant service (Assaf & Scuderi, 2020; Seyitoğlu & Ivanov, 2020a; Seyitoğlu & Ivanov, 2020b; Shin & Kang, 2020; Sigala, 2020), and drones-delivery (FINN, 2020).

5. Conclusion

5.1. Contribution

This study contributes to the literature by exploring the elements of 'New Normal' of (post-)viral tourism and the role of technology in it through an exploratory qualitative approach based on documents analysis. The paper provides the elements of the 'New Normal' of (post-)viral tourism from the contexts of supply and demand. Both contexts have various sub-groups and related elements. The supply-related aspects consist of operations (sub-groups: cleaning and disinfection, and physical distance), marketing, and finance and strategic management. Demand-related aspects include psychological issues and travel behaviour. For the elements of each group, technological elements that show the role of technology in the 'New Normal' of (post-)viral tourism are revealed as findings of the present study.

5.2. Implications

The results of this study indicate that the elements of the 'New Normal' are interrelated and based on health and safety issues. In this regard, technological tools may be beneficial to gain competitiveness in the post-viral tourism market, as previous studies suggest (Seyitoğlu & Ivanov, 2020a). On the other hand, the findings showed that psychological issues such as fear and anxiety, neophobia and xenophobia are likely to shape tourist behaviour in the (post-)viral tourism and technology can be a remedy to decrease tourists' fear and anxiety by providing contactless and safe service (Gretzel et al., 2020; Rahimizhian & Irani, 2020; Seyitoğlu & Ivanov, 2020a, 2020b; Shin & Kang, 2020).

Tourism and hospitality firms would need to transform their business processes (operations, marketing, human resources and financial management) in line with the elements of the 'New Normal' of (post-)viral world. From operations management and marketing perspectives, once implemented in a more hidden way beyond the eyes of the guests, cleaning and physical distancing should become a visible and critical part of the tourism/hospitality product. Companies have to mention their enhanced cleaning protocols, certifications, and physical distancing practices on their websites and promotional materials as large hotel corporations did during the early stages of the pandemic (see, for example, Hilton, 2020). The technological tools used for cleaning and physical distancing (e.g. robots with UV light) also need to appear on the websites and in promotional video

clips on social media. These actions can help to build travellers' trust and reduce their anxiety. Furthermore, physical distancing means that companies have to increase the space available to one tourist, hence decreasing their service capacity (e.g. fewer seats in restaurants, fewer rooms in hotels, fewer visitors in museums). This may improve the experience of tourists because overcrowding will decrease, and they will feel more comfortable. Moreover, tourists who have safe and pleasant experiences are likely to share information about their experiences on social media, thus creating positive word-of-mouth (Cetin & Dincer, 2014).

However, from a financial management perspective, decreasing the service capacity would ultimately mean higher prices for the tourists because companies' fixed costs would need to be distributed among fewer customers (Ivanov et al., 2020). Due to their substitution and enhancement effects, automation technologies would help tourism and hospitality companies to serve more customers with their available employees (Ivanov, 2020), hence, helping them distribute their costs among more guests, keep costs under control and avoid falling into a liquidity trap during viral outbreaks (Ivanov et al., 2020). Thus, investment in technology may be crucial for tourism and hospitality firms in (post-)viral tourism (Soria, 2020).

From a technology perspective, tourism is a good ground to test various technologies for the post-viral world for several reasons. First, the large number of passengers (e.g. at airports, museums, hotels) provides the necessary scale to test technologies and generate sufficient and reliable data to assess their efficiency. Second, the cultural diversity of tourists and tourism/hospitality employees facilitates the testing of technologies in different cultural contexts. Third, similar to all other service industries, tourism and hospitality operations include front-of-house and back-of-house activities (with and without customer participation, respectively), that allows testing technologies dedicated for use by employees only under strict use protocols (e.g. robots with UV light), or by employees and tourists (e.g. room service delivery robot, thermographic cameras to measure body temperature, mobile room keys). In this regard, tourism and hospitality companies and technology producers should work together to develop, test, and implement technological solutions needed for tourism, hospitality, and other industries.

From a policy perspective, governments may change the categorisation criteria by increasing the space requirements per tourist (e.g. larger room sizes). Moreover, compulsory governmental health and safety protocols that some countries already have are also necessary. However, a collaboration to establish wider international regulations on health and safety to allow international travel is crucial for the survival of the tourism industry in the (post-)viral world, especially in terms of technologies (e.g. the introduction and recognition of digital (electronic) health passports/certificates). Therefore, a greater private-public partnership on both the destination and international levels is needed to protect the interests of all stakeholders.

5.3. Limitations and future research directions

The present study has some limitations. First, the findings are based on document analysis. Future research can use interviews with the representatives of tourism and hospitality firms, tourists and policymakers to have deeper insights on the subject. Furthermore, although this study provides some initial insights related to the 'New Normal', more research is needed to show the connections between the changes and the differential effects of the changes on companies from the various sectors in tourism and hospitality (airlines, hotels, restaurants, car rental, visitor attractions, guide services, etc.). Future research may also adopt a quantitative approach (develop a questionnaire) using the emerged categories and sub-categories of this study to test the elements of the 'New Normal', the role of technology, and the relationship of these elements with different variables for both supply- and demand-side. Although there are studies which are implying the New Normal (Ateljevic, 2020; Dewi, 2020; Shin & Kang, 2020; Simanjuntak & Fitriana, 2020), empirical studies are needed to show the actual changes in demand and supply in tourism/hospitality, especially on the role of technology.

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