SMART TOURISM TRIGGERS TOURIST MINDS – DO YOU HAVE THE MIND TO MIND IT?

Shuxratovna, Muxtorova Nasiba, *Westminster International University in Tashkent, Uzbekistan, nmuxtorova@lyceum.wiut.uz*

Kiran, Prabha, *Dr, Westminster International University in Tashkent, Uzbekistan, pkiran@wiut.uz*

Ekiz, Erdogan, *prof. dr., Dean, TEAM University, Uzbekistan, erdogan@teamuni.uz*

Abstract:

This paper investigates the smart tourism business and the way this sector positively impacts rural communities through economic diversification from diverse commercial activities. The essential aspect of Smart tourism is that it is transforming as a result of the digital revolution. The advancement of new technology has resulted in remarkable digital transformations in the tourist industry. Tourism was one of the most affected sectors during the ongoing pandemic situation. The sector is in need of drastic strategic decisions focusing on Tourist locations, complexes, goods, business experiences, and ecosystems as these are continuously evolving. This involves establishing and growing new business partnerships, business models, and capabilities in the tourist industry. The research question is" What is the importance of Smart tourism, and how it has affected tourists' behaviour "? The research aim is to analyse the role of smart tourism in emerging countries with a special focus on Uzbekistan and its challenges and to use a conceptual approach and focus on the travel and tourism business. Our study aims to identify the relationship between trust and Smart tourism dissemination in digital marketing through the lens of the theory of mind (ToM). ToM plays a mediating role in enhancing the image of a smart destination and consequently improves tourists' behavioural intentions. The study findings have revealed that there exists a significant role in tourism innovations and their advantages and barriers in developing countries. The applicability of digital transformation is an essential tool to improve smart and sustainable tourism techniques, which is the concept of the proper paradigm for increasing the quality of life and social value of both visitors and local people. This impact of smart tourism is directly related to the overall tourism experience leading to creating value for the tourists.

Keywords: Digital transformation, Smart tourism, tourism innovations, tourism experience, experiential value.

1. Introduction or background

The term big data has gained widespread acceptance in academia and industry due to the constant advancement of technology. It is critical to enhance the tourist business by introducing big data and related technologies. It is essential to create a travel information-sharing platform based on big data to increase coordination in multiple locations and encourage passengers in making informed

decisions as cloud computing, which includes data storage and processing, is the primary technology utilised in the big data platform (Liu, 2020).

The origin of the tourist destination SMART model was found long back ago when Peter F. Drucker (1954) introduced the word "smart" in his book Practice of Management, and it was defined by the acronym "SMART," which stands for Specific-Measurable-Achievable-Realistic-Time (Cited in Bakhtiyorovna, 2011, p80). There are two general approaches to the topic of "Smart" tourist destinations, which some researchers have argued. Some scientists emphasise building Smart cities, while others believe that the crucial element is the function of "Smart" technology in tourism demand and marketing. Based on that, there are various studies with theoretical and methodological angles that will be discussed further (Bakhtiyorovna, 2011).

According to Phillips (2000), there are two types of methods of smart tourism: 1) smart demand, including the use of management strategies determining demand and access; 2) smart marketing tactics capable of targeting the relevant client segments and delivering suitable messages (Cited in Li et al., 2017, p2). The extent to which digital technology has contributed to our awareness of the tourist system, particularly in how visitors choose where and when to visit and the nature of their experiences while on the trip, is one of the significant advances enabling tourism design.

Smart tourism has transformed into a vision and a general "blueprint" that allows many countries and cities to develop programs for creating new technological infrastructures, developing smart end-user applications, and focusing on innovation in terms of enhancing tourism experiences and improving the competitiveness and attractiveness of tourists' destinations over the last few years (Xiang, Stienmetz and Fesenmaier, 2021; Vahid and Piri, 2023).

The application of Smart tourism has a huge value in terms of a well-known concept such as the Theory of Mind (ToM). The applicability of ToM in smart tourism allows for analysing tourists' perceptions and attitudes and their perceived destination image and behavioural intention. As an outcome, this study combines ToM assessment, a psychological theory, with the perceived quality of smart tourism applications, destination image, and behavioural intent. Tourism marketers may better grasp the value of ToM on tourists' perceptions of a location by investigating its mediating role. With the major idea connections of this study, this insight will give further evidence for a cross-disciplinary study between psychology and tourist management (Tavitiyaman et al., 2021).

The **main question** this paper is trying to answer is 'What is the importance of Smart tourism and how has it affected tourists' behaviour?

The **objective** of this study is to analyse the role and the perception and the relationship between trust and tourists' satisfaction in smart tourism. Additionally, this research aims to find a solution to the major research issue about the opportunities and obstacles of Smart tourism in Uzbekistan. Meanwhile, the research will look into the globalisation of the economy due to digital transformation and the impact of digitalisation on tourists' attitudes in today's dynamic and challenging international business environment.

2. Significance/contribution to the field

It has been claimed that people live in a constantly transforming world and are influenced by the advancement of information and communication technology (ICTs). As a result, technology is highly crucial in promoting tourist locations, distributing and marketing tourism, and assisting travellers before and during their visit. The tourist destination should evolve into an emotional and experiential destination as well as a smart destination. Tourists actively connect with service providers and cooperate in co-creating their own experiences as a result of this strategy, which adds to innovation on countless occasions (Liberato, Alen and Liberato, 2018). The development of smart tourism by the tourism industry is motivated by the desire to improve visitor experiences. To better understand

visitors' choices for STA, it is necessary to understand "new" tourists and their demands in the smart era. Based on a comprehensive review of published articles on e-tourism, it has been summarised key tourist demands in the information era, including time value and less willingness to wait or face delays, searching for travel-related information via the Internet, booking online tickets and making room reservations and making online purchases (Wang et al., 2016).

The pandemic situation brought severe obstacles to the travellers and tourism business, while many places across the world were locked down; however, at the same time, it led to strengthening the smart tourism approach, which was not well developed in emerging countries (Bulchand-gidumal, 2021). Due to this outbreak, the use of technology and innovation to "facilitate the tourist's experience through a digital platform," and all companies had to be connected to the digital infrastructure. Smart tourism adopted multiple layers of digital services functioning as drivers of smart destinations (Glasco Jon, 2020). Smart tourism is evolving quicker as communication and information technology continue to advance. Because of the rapid growth of smart tourism, the tourism sector is paying more attention to digital development, which may provide greater convenience for visitors and allow them to utilise the tourism resources of diverse destinations fully. All business sectors, including private and state organisations and local governments, will benefit from smart tourism. In addition, tourists may benefit from smart tourism's improved service experience throughout the entire process of gathering travel information, making trip plans, paying for travel product bookings, enjoying travel, and reviewing and assessing travel (Wang et al., 2020).

Along with smartphones, social media has become a significant foundation in the development of a smarter experience that makes the excessive information available to all users, which may be grabbed down to the individual level, the combination of both facilitates more customised and truly context-aware experiences (Femenia-Serra and Neuhofer, 2018).

Some gradual improvements have been observed even in developing country Uzbekistan in terms of digitalisation, though modern Uzbekistan has not adapted to the Smart City's standards. Management, taxes, infrastructure, marketing, education, medical, and other fields have all created eastern "smart" systems throughout history, particularly in Uzbekistan's cities. On the state policy level, the development of smart cities in Uzbekistan is now attracting the most attention, and the government has established a strategy for implementing smart city technology (Shohistahon et al., 2020). To implement it accordingly, technology is highly crucial in promoting tourist locations, disseminating and marketing tourism, and assisting travellers before and during their visit. Smart tourism's strategic orientation as targeted at leadership, entrepreneurship, human capital, innovation, and social capital development, focusing on the innovation and productivity elements.

The following are the basic concepts of SMART-TOURISM:

- Contribute to the development of tourism perceptions
- Providing micro and macro-level integration of tourists in the tourism industry to ensure efficient distribution of bonuses to the local community
- Supporting micro and macro level incorporation of tourists in the tourism industry to ensure efficient distribution of bonuses to the local community in tourism activities by gathering additional information within the frontiers of the tourist area. Regional tourism intends to integrate information technologies in the Smart Tourism network, attain account stability, develop tourist attitudes, serve tourist demands, and promote management resource productivity (Muhamadiyev, 2015).

This research aims to provide a systematic and comprehensive survey of the literature on smart tourism by identifying new advancements, subjects, areas, theories, methods, and industrial applications. As a result of the findings, further research areas are recommended. The study will primarily collect data utilising a quantitative strategy such as a Google survey questionnaire to examine the relevant literature. It is essential for the theoretical foundation to gain widespread acceptance of ST, since

digital transformation in ST is not a well-developed concept in Uzbekistan. Due to the fact that it has not been studied intensely, it is critical to conduct a current review of the literature in order to solid basis and direction for future study.

3. Literature Review

Smart tourism research is still extremely limited, which needs to be developed as solid foundations for striving for smart tourist business and these assumptions must be further explored and validated. The following discussion highlights some critical research topics that must be addressed to successfully achieve smart tourism aims. While location-based services are tremendously useful for travellers, they often put customers at risk since interactions with suppliers and, as a result, their apps/services are often short-lived, and trust-building is limited in the tourist industry (Gretzel et al., 2015). It's worth noting that booking vacations and other tourist-related services is quite popular on the Internet, which means that travellers have adapted to technological advances because they not only make information more accessible and usable, but they also serve as factors that explain tourists' requirements and goals (Liberato, Alen and Liberato, 2018).

A smart tourist's digital footprint is substantial, and the options for exploring the digital traces left behind, whether on vacation or business, are wide-ranging. Andrejevic and Burdon (2015) noted that Smart tourism is rapidly responding to and positively impacting, which is defined by ubiquitous, always-on data collection (Cited in Gretzel et al., 2015, p184). However, the heavy reliance on technology is another concern increasingly being explored in the context of smart tourism. According to Minghetti and Buhalis (2010), for individuals without smartphones and places that cannot afford to create smart tourist infostructures, this has significant repercussions in terms of a widening digital gap (Cited in Gretzel et al., 2015, p184).

Molz (2012) presented that building more intelligent, meaningful, and long-lasting interactions between visitors and destinations using mobile digital connectivity is the fundamental basis of creating Smart tourism (Cited in Li et al., 2017, p2).

Yao (2013) believes that tourism resources and education may be systematically established by correlating current information technology with tourism services, tourism management, and tourism marketing and by keeping tourists' interactive experience (Cited in Li et al, 2017, p3). These advancements may be used to benefit the general public, businesses, and government, assisting these entities in entering a new stage of "tourist informationisation, especially for emerging countries such as the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan.
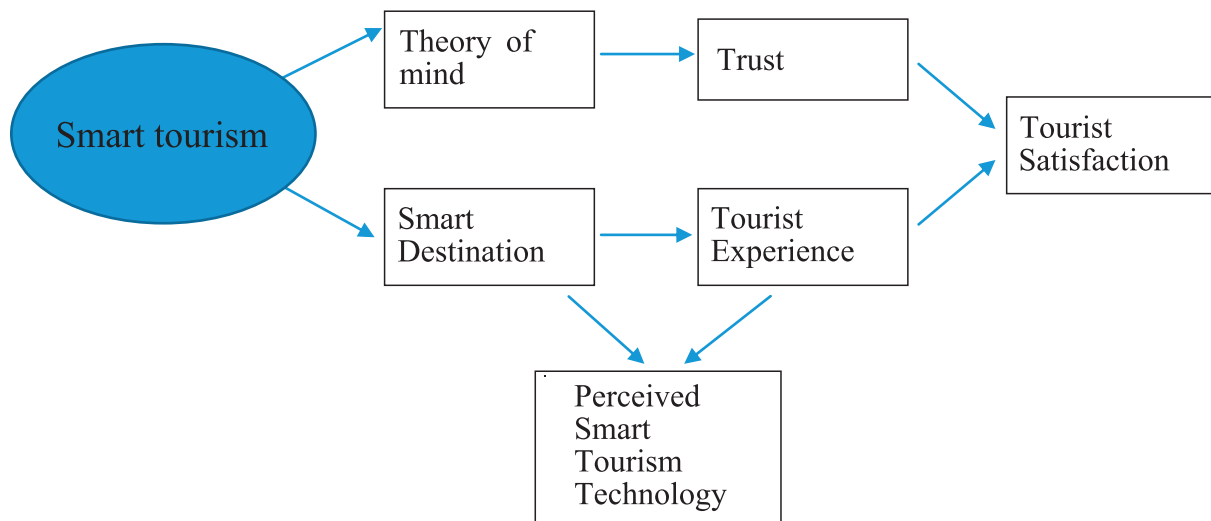
According to Leslie (2011), the term "theory of mind" (ToM) is extensively applied, which depicts mental states such as emotions, beliefs, knowledge, and intentions also, ToM aims to determine how individuals think in the context of interrelations and interactions within the situation (Cited in Tavitiyaman et al., 2021). Through ToM, tourist behaviour and satisfaction can be evaluated; as a result, travellers' perceptions and attitudes regarding smart tourism apps and their perceived destination image and behavioural intention may be studied (Tavitiyaman et al., 2021). Tourists' valuation of smart technology services, such as the Internet, public Wi-Fi, basic tourism service support, mobile device guidance, and service promptness, were studied by Lee et al. (2018) and noted that tourists' perceptions of value, assessment, and enjoyment are improved by these smart technology offerings (Cited in Tavitiyaman et al., 2021, p907). People have started perceiving ST positively, and it has been observed that people more rely on Smart Tourism Technology which gives them reliable information about activities, lodging, and transportation which lets visitors spend less time and effort looking for information, and as a result, most the travellers are satisfied with their experience. According to empirical studies, tourism or travel obtains hedonic experience, and visitors' satisfaction varies depending on their personality and destination categories. All elements of tourism, involving transportation, accommodation, and attractions, are included in smart tourism. Tourists' experiences will be enhanced if they have positive feelings and attitudes regarding ST. As a consequence, tourist happiness is generated through travel satisfaction. (Pai et al., 2020). Carbonell and Escudero (2015), Ozturk and Hancer (2015), X.and Wang et al. (2016) explored how technology affects consumers' memorable experiences, satisfaction, and intentions. According to Carbonell and Escudero (2015), when customers get unpleasant technical experiences, it automatically will impact their desire to use any smart devices again (Cited in Jeong and Shin, 2020, p1467).

Tourist destination trust is described by Amin (2016), Jacoby and Chestnut (1978), Jacoby and Kyner (1973), Tabrani et al. (2018), Zeithaml et al. (1996) as a base of tourist loyalty that people have already experienced and is defined in this approach through attitudinal and behavioural trust. As Chi and Qu (2008), Wang et al. (2019), Yoon and Uysal (2005) stated, in the tourism sector, attitudinal loyalty is most commonly used to understand and quantify visitors' destination loyalty (Cited in Azis et al., 2020, p609).

Although many scholars have examined the concept of ST sites and co-creating visitor experiences, there is still a study gap because smart tourist applications and theoretical contributions are rarely discussed. Both conceptual and empirical approaches allow us to examine which sources of information, among the following, are favoured by individuals for reserving hotels: e-reviews, hotel rating systems, travel agency recommendations, and travel guides, in an experimental design and according to it the survey will be conducted. According to several researchers, Gretzel (2007), Hennig-Thurau (2005), consumers see e-reviews as trustworthy information because trust is seen as a crucial factor for maintaining equilibrium in asymmetric information settings (Cited in Sidali, Schulze and Spiller, 2009). Xiang and Fesenmaier (2016) noted that a huge amount of data analysis should be leveraged for ST projects and one of the current growth in the business tourism sector is the advancement of Internet technology, or modern tourism progress, which is taking presence in the digital market (Cited in Sabou and Maiorescu, 2020, p72).

4. Proposition development

Digital tourism, according to Buharis D. and Jun S. (2011), is a paradigm change in tourism owing to the rise of digital technology. Smart tourism brings to the establishment of e-tourism activities, such as various offers from tour operators and travel companies. Consumer e-data, e-booking (hotels, transportation, etc.) and e-payments are all part of e-tourism. Digitisation is advancing in

many aspects of life today, leading ST to be adopted and implemented to improve the country's infrastructure (Cited in Kayumovich et al., 2020, p367).

Several studies in tourism research support the effects of smart tourism technology on memorable travel experiences. According to a bibliometric survey Johnson and Samakovlis (2019), smart tourism aims to explain the integration of diverse technological components that interact with humans to enhance visitor experiences. Furthermore, Johnson and Samakovlis (2019) noted that a smart city tourism destination must use innovative technologies to offer interconnected visitor experiences (Cited in Azis et al., 2020, p609). The application of ST signifies the exceptional importance of automated control and information systems in our everyday routines and leads artificial intelligence to emerge in the near future. Companies can provide such services through "Smart Zones" to attract more tourists and improve the comfort of their accommodations, and Internet capabilities will boost, which is considered a shortage, especially in emerging countries where Wi-Fi is not available everywhere. ST locations can readily acquire tourist information, connect and communicate with travellers on the spur of the moment, and personalise services to meet the demands of each tourist, thanks to STTs (Jeong and Shin, 2020). Zach F and Krizaj D (2007) noted in their recent research on ST that technology is the key to improving a destination's competitiveness and that the usage of smart technologies is critical throughout the tourist experience, from trip planning to travellers staying at a particular location. As a result, transforming tourist sites into "smarter" ones has been considered a means to improve, given that the design of tourism experiences and how they are provided and consumed has evolved dramatically (Cited in Vizuete et al., 2021, p2).

P1. The importance of Smart tourism is growing.

Buhalis and Amaranggana (2015) stated that the role of ST is to enhance visitor experiences through better customisation of services and goods and a dynamic, collaborative value co-creation is a primary goal of smart destinations, noted Boes et al., (2015). This goal is achieved by integrating big tourist data from many sources into a single central, real-time platform that enables better decision-making and enhanced experiences (Cited in Femenia-Serra and Neuhofer, 2018, p136). Perception of tourists toward E-tourism can be discussed broadly wide, but most of them are considered as a source of knowledge which pushes people to enlarge their horizons through finding out something new for them, such as conducting a search on destinations and selecting a vacation spot to visit (Tavitiyaman et al., 2021). Huang (2017), Tussyadiah and Fesenmaier (2007, 2009) stated that using ST has influenced on visitors' memorable experiences in smart tourism sites and future behavioural intentions. Bae (2017) stated that when tourists go or prepare to travel, smart tourism affects the way they engage with one another; they can use smart-tourism destination portals to choose the activity that best matches their planned vacation after purchasing a flight and lodging. Smart tourism, according to Gretzel (2015) study, ST is able to increase the perceived value of customers by emphasising efficiency and experience enrichment. This study defined efficiency as the value and time saved by using a smart-tourism destination platform (Li, Fang and Sukoco, 2021). All elements of tourism, including transportation, lodging, and attractions, are included in ST, which enhances tourists' experiences and has favourable feelings and attitudes.

P2. Smart Tourism has changed people's perception of tourism.

According to all experts, tourist trust is inextricably linked to a destination's image. The image of a tourism site is badly harmed if it is perceived as suspicious, making it feel hazardous and unsafe to visit. Chang (2009) Williams & Balá (2013) claimed that it is logical to assume that visitors

who are unfamiliar with the destinations they visit will use what they encounter and discover at the destination as references to build their trust system. As a result of trust crises, tourists may be concerned about safety and possible threats, and a poor image of the place may develop in their thoughts. According to Abubakar (2016), in forecasting visitors' attitudes and behaviour intentions, trust in a picturesque site is an important factor to consider. Tourists may be willing to pick a safe place in order to avoid potential travel dangers. As a result, creating visitor trust in a gorgeous place may have a favourable influence. Tourists' subjective perceptions of a picturesque site influence their trust in it (e.g., reliability, warranty, and guarantee). As Roodurmun & Juwaheer (2010) noted, by meeting visitors' emotional and fundamental requirements, mutual trust may be formed between the picturesque place and tourists (Cited in Liu et al., 2019, p387). Trust that leads to tourist satisfaction can be impacted by memorable tourism experiences and destination loyalty in various countries. For example, Tung and Ritchie (2011) argue that memorable tourism experiences would evolve into ineffable events that flood travellers' emotions with happy memories. Additional researchers asserted that other elements such as travel motivations and unique tourist experiences enhance destination loyalty. According to Jeong and Shin (2019), when visitors have a lovely recollection of their vacation that they consider worthwhile, they are more satisfied and likely to return. Furthermore, prior visitors' encounters with novelty and emotional sensations are the most remembered features that increase tourist satisfaction and behavioural intentions (Cited in Azis et al., 2020, p610).

P3. The relationship between trust and tourists' satisfaction in smart tourism is interconnected.

5. Theory of Mind (ToM)

Since its original suggestion in Premack and Woodruff's (1978) work, the idea of Theory of Mind (ToM) has evolved significantly. The focus on humans, particularly human acquisition, has created methodological issues currently being debated. In a similar spirit, Apperly (2012) contends that ToM involves more than a conceptual understanding of mental states and it is also considered as a combination of cognitive processes and a social skill that attests to individual diversity; hence, no one activity can be regarded the appropriate "measure of ToM" throughout development. In psychology, one of the well-known theories is ToM, which refers to the capacity to assign mental states such as emotions, beliefs, understanding, and intentions. ToM focuses on determining individuals' behaviour from the perspective of interconnections and relationships within the situation. Leslie (2001) noted that the main purpose of ToM is to forecast other behaviours (Tavitiyaman et al., 2021, p905).

Numerous tourist experience research has entirely focused on describing the emotional state of tourists after their trip, and ToM helps to identify it. Servidio and Ruffolo (2016) stated that emotional connection boosts the recollection of memorable travel encounters (Scott et al., 2017). According to Decrop (1999), Del Bosque & San Martin (2008), Echtner & Ritchie (1993) Gallarza (2002), Mak (2017), in the travel and tourism literature, ToM's cognitive and emotive viewpoints are frequently utilised to explain visitor behaviour. Tourists evaluate their experiences and construct opinions and judgements based on these cognitive aspects, whilst the emotional element is formed through the assumption of feelings. The following qualities from Wang et al. (2016)'s study have been used in tourism to evaluate visitors' feelings while using smart sightseeing. Tourists generally use cell phones to find information while travelling, as said by Xia et al. (2018). Tourists assess the perceived quality of ST applications they use throughout their journey when they visit a place, affecting their cognitive beliefs and attitudes regarding the destination. Based on Kim &Yoon (2003) findings, the use of ToM may encourage potential visitors to promote the destination's

reputation, and the tourist behaviour is affected by brand equity, which is a broad phenomenon shaped by cognitive and emotive evaluation. ST destinations can increase people's and visitors' quality of life and improve tourists' experience. Moreover, this performance can strengthen travel experiences, establish a favourable perception of the location, and show the potential for loyalty (Cited in Tavitiyaman et al., 2021, p909).

6. Impact of Covid-19 on tourism.

Covid-19 has had a detrimental influence on the global economy in 2020. Due to industrial features, the tourist sector has been severely harmed, and the tourism profit margin has plunged substantially. People were unable to travel worldwide because of lockdown and restrictions, which made the level of implementation of intelligent tourism directly impact the safety and quality of tourism (Yang, Yan and Wen, 2021). According to UNWTO data cited by McKinsey, the pandemic caused "The travel and tourism sector is in the midst of a historic crisis. In 2020, international visitor arrivals were expected to drop by 60 to 80 per cent, and tourism expenditure is unlikely to recover until 2024." On the other hand, some industry analysts estimated that the global online travel market would reach around $818 billion by 2020, led by demand for mobile travel applications and websites, leading up to the epidemic. Tourists will still be interested in new smartphone apps that offer value to the travel experience in the post-pandemic era (Glasco Jon, 2020).

COVID-19 has exacerbated the necessity of innovation in the tourist business. The most prominent innovations can be implemented in this industry to prevent the loss of tourists during the pandemic and escalate the number of visitors. E-Tourism has changed strategic and operational management, introducing a wide business process re-engineering across various sectors. Due to the total shutdown of international and domestic travel caused by obligatory quarantines, a vaccine program and worldwide travel restrictions, tourism is one of the most damaged industries by the COVID-19 pandemic (YÜZBAŞIOĞLU, 2021).

Covid-19 led an explosion of interest in automation and robotic systems in tourism and hospitality, such as automation technologies (IoT, Artificial Intelligence, Virtual Reality, automated vehicles). Undoubtedly, automation technologies have helped tourist organisations reduce passengers' risk of infection and prevent the spread of the virus; however, emerging countries faced some difficulties due to the lack of artificial intelligence platforms (Zafri et al., 2021).

Considering tourism in crisis as a significant issue tourism industry managed to move up to recovery and reinvention by taking steps like:

- Working with the business sector and other cities to share innovative ideas and co-create unique tourism services
- Increasing the use of electronic marketing, augmented reality, and navigation systems to assist tourists in finding sites
- It enhances the experience and value of hybrid and online events by facilitating new digital and virtual solutions for event facilities and services (Glasco Jon, 2020).

It can be added that Covid-19 has changed the mode of travel and travellers' behaviour. Digital travellers' and the general public's behaviour has rapidly altered. New innovative technologies have significantly boosted people's willingness to engage in co-production, enhancing travel experience through virtual visits to natural and cultural places, planning, booking, etc. The digital transformation environment has also been noticed in businesses and destinations were promotional and marketing innovation boomed tourists' minds (Petrović et al., 2021).

It is predicted that people will choose the places near their houses after Covid-19, and the concept of smart cities to smart regions should be well developed, which offers a chance for tourism to be revitalised collaboratively (Calderon, 2020).

To summarise, the pandemic has had a severe influence on the tourist sector as a whole, particularly conventional tourism, but it has also boosted smart tourism to some extent. It has encouraged smart tourism modes and indices and influenced people's travel attitudes (Yang, Yan and Wen, 2021).

7. The Development of Smart Tourism in Uzbekistan

Tourism has always been a service sector, with staff that lack thorough knowledge of technical skills. We can say about tourist business, which requires a huge number of information technology, software engineering, and data analytic abilities as big data develops. ST cannot function without the assistance of skills in innovation; unfortunately, the tourist sector continues to employ standard training and recruitment practices that are unable to satisfy the ST demand (Liu, 2020). The Republic of Uzbekistan places a high priority on the growth of information and communication technology in order to implement it to enhance ST. Moreover, in executing tourist activities, local tourism firms actively exploit new technological advances and electronic applications to convert the tourist industry into a strategic sector of the economy. As the Internet is rapidly transforming the tourist industry throughout the world, and many businesses are trying to adapt to new technologies and The State Committee for Tourism created the www.uzbekistan.travel online platform in 2016. Travellers have access to all travel information, and potential visitors and organisations can learn about historical landmarks, tourism attractions, routes, history, geography, culture, and customs, among other things. The portal has been massively upgraded in response to market demands. New portions have been added, the technical condition is upgraded, and mobile traffic is streamlined. In the last few years, it has been observed that the number of Uzbek users of mobile applications and QR code technologies during their trip has been increased, and reviews and recommendations of travellers about routes, hotels, and restaurants in social media show maximum satisfaction (Kayumovich et al., 2020).

Figure 1. Uzbekistan promotes Smart tourism https://www.uzdaily.uz/en/post/42264

Furthermore, The State Committee for Tourism Development has worked on a plan for smart technology in state museums and cultural heritage sites that allow Uzbekistan to attract more visitors. For instance, Verum QR launched a project to provide QR codes to 50 historic sites in Bukhara, offering tourists to access information about the locations using their smartphones. Besides, tourists are able to get information on nearby items such as hotels, restaurants, and other attractions. In addition, the government is also contemplating disseminating Bukhara's expertise throughout the country, which will lead to the growth of ST. ST's significant goal is to implement an e-ticket and electronic visitor registration system, virtual tours, deployment of audio guides, production of electronic catalogues of historical monuments in foreign languages and their 3D models, and creation of a mobile platform that enables the translation (UzDaily.com, 2018). The new technology can now be tested in the Poi

Kalan complex; the Gaukushon, Kukeldash, and Nodir Devonbegi madrasas; the Toqi Sarrofon, Toki Telpakfurushon, and Toki Zargaron domed bazaars; the Lyab-i Khauz square; the Nasreddin Afandi monument; the Arch Citadel; and the Jewish Synagogue (Aliyeva, 2018). These services at ST locations are one of the efficient strategies to fulfil tourists' demands and maximise touristic experiences. Advanced ST in Uzbekistan is being developed step by step, which aims to respond to tourists' needs, which necessitates offering unforgettable consumption experiences.

The biggest advancement in Uzbekistan is the first "smart" city Nurafshon. The Republic of Uzbekistan's Cabinet of Ministers issued a resolution on the "Concept of the Introduction of "Smart City" Technology in the Republic of Uzbekistan" on January 18, 2019. There have been "Smart City" innovations in Uzbekistan before, but this is the country's first legal framework for its growth. There are ten areas designated for implementing smart principles and three active initiatives to be included in the smart city framework: Nurafshon, Tashkent City, and Delta City. For instance, the Nurafshon smart city project is planned to attract $2.5 billion in foreign investment and will be built by professionals from South Korea and Singapore. These initiatives have an impact on the economic growth and geographical shape of cities and the source of economic investment and technological contribution (Wolf, 2019).

8. Challenges in implementing ST

Most tourist destinations now have wireless network penetration; however, in order to meet the construction needs of smart tourism, tourist attractions must also extend their own information infrastructure and boost the capacity and speed of data transmission. Despite it, there are still limitations and obstacles, such as a poor innovation ecology and an inaccessible intelligent information and ICT ecosystem (Rotchanakitumnuai, 2017).

For instance, though the development of smart cities in Uzbekistan is now receiving the most attention, the Republic of Uzbekistan has devised a strategy for implementing smart city technology. However, Uzbekistan is still in the early stages of implementing new technologies such as "Smart City." A smart information and communication infrastructure is not well-developed on a high level to apply ST around all regions of Uzbekistan. The establishment of a system for providing favourable Internet access conditions is still falling behind. Though Internet penetration levels in Uzbekistan have consistently increased but users still have poor connection quality and frequent disconnection. According to Speedtest, Uzbekistan's average fixed broadband download speed was 26.48 Mbps in May 2020 (ranking 97th internationally), while the average mobile broadband download speed was 11.20 Mbps (128th place globally). In limited areas, Uztelecom and numerous mobile service providers provide public Wi-Fi hotspots. Another barrier that does not allow ST to be perceived fully is a costly Internet connection in relation to household income. In addition, the government began requiring users to pay a charge to register their mobile devices' international mobile equipment identity (IMEI) numbers (see C4) in November 2019, adding yet another barrier to getting online (Uzbekistan: Freedom on the Net 2020 Country Report | Freedom House, 2019).

There are some factors such as legal, political, and environmental culture as well as the implementation of sophisticated systems for power and large-scale operations to use water and other energy resources efficiently. All these measures should be updated communications networks and the identification of the primary sources of financing for urban infrastructure renovation (Shohistahon et al., 2020).

First of all, modern communications technology infrastructure must be developed to attract more tourists not only for historical sightseeing but also to build Smart cities to improve public and public life, enhancing governance by meeting their needs and requirements (Shohistahon et al., 2020).

The visitors' complete integration with current information and communication technologies and deficiencies in the supply of electronic systems and interactive services are the most significant tasks to be completed. The access to Wi-Fi and the speed of the Internet are the problematic factor, especially in some regions where the connection is not stable, which might be inconvenient for those travellers who have their own online pages where they are constantly sharing their travel experiences (Musaev, 2017).

Another fact that creates the main barrier to developing ST is being not aware enough of the importance of digitalisation and using innovation to build Smart economy, Smart environment, Smart government, Smart living, and Smart mobility. There are some other limitations and challenges poor innovation ecology, an inaccessible intelligent information and ICT ecosystem, and a poor knowledge management culture (Rotchanakitumnuai, 2017). Boes et al. (2016), Gretzel et al. (2015), Koo, Yoo, Lee, & Zanker (2016), Mistilis & Gretzel (2013), Rotchanakitumnuai & Speece (2003) claimed that smart destination implementation is hindered by the lack of IT skills, a lack of privacy, and security risks (Cited in Rotchanakitumnuai, 2017, p5).

Establishment of an adequate legislative, administrative, and institutional framework for the introduction of digital infrastructure in the development of smart city technologies, strengthening the economy for intellectual services, supporting the development and implementation of intellectual services, and the awareness of the population. Lack of information on the core roles of Smart City prevents solving the city's an engineering and communication problems and insufficient and outmoded urban infrastructure (Shohistahon et al., 2020).

8.1. Methodology

The technique that the author plans to conduct is referred to as research methodology. This involves areas such as data gathering methods, statistical analysis, and participant observations using statistical tools for data analysis (What is research methodology? - Paperpile, no date).

This study aims to determine the tourists' behaviour and the perception of ST through the lens of the theory of mind (ToM).

Q-methodology is an exploratory research method commonly used by researchers to explore people's attitudes about a topic, and the findings from Q are intended to provide a holistic perspective of people's subjective opinions on a topic. Researchers use exploratory research when they need to learn more about an existing phenomenon and obtain fresh insights into it to formulate a more precise problem (Geogre, 2021).

This report lays forth clear research directions for potential future inquiries. Existing literature on ST experiences is still in its initial phases; this topic should be appropriately viewed because few studies have been on Asia, particularly an emerging economy.

This study is intended to apply both quantitative and qualitative techniques, which allow for studying more deeply. It is vital to remember that qualitative and quantitative research provides better outcomes. The fundamental goal of quantitative research design is to identify some general patterns of behaviour in a statistically significant context across numerous situations. Quantitative research is concerned with numbers and statistics for data collecting and analysis, whereas qualitative research is concerned with words and meanings. Both are required for obtaining various forms of data. The approach was chosen in order to put a tested hypothesis to the test and see if it should be accepted or rejected. On the other hand, a qualitative research strategy describes phenomena that may be seen but cannot be measured or characterised owing to its structural shape (Farnsworth, 2019).

Numerous case study analysis has been used to examine the chosen theoretical background: a case study is "a research technique that focuses on understanding the dynamics occurring within single contexts". It incorporates various data collecting techniques, including archives, interviews, surveys,

and observations. The evidence might be qualitative, quantitative, or a combination of both, which allows for getting much information (Corte et al., 2017).

This article presents a visual depiction of the procedures and methods used in doing research using grounded theory as an overview of the approach. Grounded theory is a well-known research approach that is used in various investigations. In a grounded theory research, both qualitative and quantitative data generating approaches might be applied. The goal of grounded theory is to uncover or develop theory from the evidence that has been collected consistently and analysed through comprehensive study (Tie, Birks and Francis, 2019). Using grounded theory helps identify tourists' experience, behaviour, and perception of ST, providing a variety of additional and exploratory perspectives and can be tested using a quantitative method.

Since only secondary data has been implemented, it should be noted that several studies have been examined in order to have a deep research on basic issues such as the influence of pre-COVID-19 on travel behaviour, tourist experience, and adoption of ST, which lead to satisfaction factors whether people trust smart application and how their travel habits have been changed through applying smart gadgets. Therefore, grounded theory is applicable for investigating a specific event or process and producing new ideas based on the collection and analysis of real-world data will be applied (Corbin and Strauss, 1990).

8.2. Methodology limitations

The current study has certain limitations that future research can investigate further. It is needed to create a whole new research typology since there is little and not enough existing research on ST application, especially in the case of Uzbekistan. Because of the restricted access, reorganising or restructuring the study might be necessary. It requires explaining why there is limited access and ensuring that findings are still accurate and valid despite the restriction.

In this condition, identifying a constraint might be a valuable chance to uncover literature gaps and highlight the need for future research in the field. One of the main caveats of this paper is surveying all regions of Uzbekistan, which might give a clear snapshot of the level ST development. The outcomes may be compared more closely, and generalisations can be tested across several sample groups.

Furthermore, ToM analysis was constrained because it was focused solely on tourists' perceptions during their trip and did not include social interactions with tourism stakeholders. The investigation exploring the after ToM evaluation and post-travel imagery and these social interactions with stakeholders as an extension of ToM principles might be the topic of future research. In addition, ToM theory has not been widely analysed in Uzbekistan, which does not allow for the evaluation of tourists' perception of ST. In order to identify it more deeply, primary data collection should be conducted. However, due to the time constraints, practical data collection such as surveys, tracking and interviews are problematic to conduct since there is a limit the amount of time available to explore.

This research combines ToM assessment with the perceived quality of Smart Tourism apps, destination image, and behavioural intention in order to analyse all these aspects, quantitative and qualitative research methods should be applied, which will give some solid statistical findings and concepts, opinions, and experiences.

8.3. Findings

Technology is drastically altering the travel experience. Using technology to enhance the experience is not a new concept. Innovation is found here in an attempt to comprehend its mechanics from an empirical standpoint. As a result, this study aims to better understand the link between information needs, information tools, and the destination's tourist experience.

From a theoretical standpoint, the key contribution is to improve understanding of the effects of technology on tourist behaviour and experiences and the trip preparation phases (Liberato, Alen and Liberato, 2018). Considering that travellers generally utilise mobile devices and laptops while travelling, the findings underline the importance of internet connection at the destination. Despite a relationship between internet availability and the reason for the travel, the biggest effect was discovered as a factor for choosing a trip and as a determinant of pleasure during the stay in the location (Cited in Liberato, Alen and Liberato, 2018, p19). It is revealed that Covid-19 pushed ST to be implemented, and the essence of ST plays a big role in the tourism industry. A significant change was made due to the Pandemic situation, which made people rely on smart gadgets; people may vary their frequency of travel by different means under the new normal circumstance relative to the one before the epidemic. During the pandemic, many people had to postpone their vacation plans and remain at home; therefore a smart tourism city may consider developing timely personalised, which was initially intended for environmental preservation and boosting tourists' experiences. As a result, smart tourist city development necessitates the informed engagement of all stakeholders in order to effectively create the city and gain long-term competitiveness in this dynamic tourism market.

ST benefits include increasing local tourism, interacting with a worldwide audience by giving customised experiences, and upgrading the global touristic viewpoint. Smart Tourism helps establish an atmosphere in which a vacationer can thrive, and it has been proven to result in favourable tourist experiences.

Findings show that emerging countries need to ensure that they are ready to apply ST to meet customer satisfaction. A fresh, innovative approach to smart cities is emerging in Uzbekistan today. Concepcion takes into account savings, comfort, convenience, architectural and aesthetic solutions, and the construction of favourable circumstances for people. Even though Uzbekistan has made substantial modifications to city development since independence, it will not be able to meet current demands, which means Uzbekistan is not fully ready to adopt ST. Several limitations, such as not all regions having access to the Internet and the high cost of Internet connection, were discovered, which prevent ST from being adopted and developed.

The statistical findings show the causal links between smart tourism apps and ToM, depicting travellers' feelings and attitudes. The results show that tourists have faith in ST applications and rely on them. Their total sense of destination can be favourably influenced by a summary of cognitive ideas and attitudes. In addition, ToM has a huge role in promoting the destination's image and customer loyalty. This important concept is psychologically linked and impacts one another. ToM must be developed and studied in Uzbekistan while evaluating visitors' feelings and emotions in order to enhance their needs and demands. This study demonstrates how well-designed ST applications might alter travellers' cognitive and emotive perceptions. Based on ToM study, the result emphasises the critical mediating function of ToM during the vacation experience. In particular, some visitors construct their ToM assessments prior to their trip experience by a variety of methods, including searching for information on relevant websites and hearing from others. The creation of relationships between smart tourism apps, destination image, and behavioural intention can be empowered by ToM mediating assessment. In terms of cognitive and affective assessment, the results demonstrate that visitors' impressions of ST apps in a place can promote ToM concepts.

Smart destinations, enhanced by information technology, are a dynamic group of interconnected characters, each of whom allows visitors to co-create unique and meaningful experiences within the context of their surroundings. Many studies in the tourism sector have found that traveller trust substantially impacts a destination's image. Consumer trust is a context-related notion, and tourism researchers are becoming increasingly concerned and interested in it, necessitating a fresh look at its conceptual and statistical aspects (Liu et al., 2019). As shown in the findings of this study, there

is evidence that the visitor experience and perceived value of smart tourism products/services have a direct beneficial impact on destination satisfaction. Besides the relationship between perceived ST and tourist satisfaction has captivated researchers' interest, few empirical studies have discovered that overall revisiting behaviour and overall satisfaction influence tourists' willingness to return and recommend a specific destination to other potential tourists. Undoubtedly, this study demonstrates that tourist trust in a destination helps shape a positive image of the destination. Therefore, to destination managers, establishing a positive destination image could be achieved through reinforcing tourist trust in the destination. The findings of the study indicate a plausible path for managers to improve destination images with significant and direct effects. Therefore, to establish a positive image, the destination should first establish a trusted image.

Several findings of this study are revealed that give a deeper understanding of the relationship between concepts of ST and ToM and developed a research model for the relationship among perceived ST experience, travel experience satisfaction, tourist happiness, revisit intention and trust. Moreover, it is seen that Covid-19 made a huge impact that pushed ST to the demanded level and increased the reliability of tourists towards ST.

While there has been significant development in ST destination research in recent years, there remains a research gap that should be analysed in Uzbekistan to focus more on its citizens.

8.4. Future Scope

The research focus will be addressed in the future study limitation to the extent ST concept to investigate travellers' perceptions, emotions, attitudes, interests, opinions, and behaviours with the help of conducting quantitative and qualitative research methods that will give a clear snapshot of applicability ToM. It is essential to have up-to-date knowledge and skills that can be leveraged to engage in the tourism market with a strategic perspective. Future development will concentrate on upgrading the current policy system in order to give the most efficient system possible by promoting this concept in cooperation with such sectors as government agencies, business, and society overall. The government has an essential role in the tourist business, and government authorities must offer legislation, rules, and oversight which will guarantee that the tourism business can maintain its level and compete with other tourist destinations.

The main aim of tourist policy is to invest in the study and production of information and ideas, as well as the development of technologies that enable the dissemination of innovation and improvement. Since the government's support is crucial, entrepreneurs and company owners should be approached to build smart city or smart destination ideas.

- Smart Economy: Innovative and entrepreneurial smart economy gives opportunities to grasp the nuances of a smart economy and to coordinate strategically targeted measures to reinforce and promote the smart economy's emergence and growth in the city.
- Smart Mobility: Access on a local and trans-local level and the existence of sustainable and secure ICT-based transportation systems which will give long-term smart mobility solutions.
- Smart Governance: Smart governance may promote successful city governing towards a Smart City by interacting with technology, policies, best practices, resources, social norms, and information. As a result, smart governance is at the heart of each Smart City program.

Travel is an experiencing product, which means that determining its perceived value by customers is essential. Social media has successfully established itself as the primary source of information creation and brand positioning. It is important to analyse the role of Social media, which is also known as a social networking site that will lead as the main instruments in today's internet age, with the potential to play a significant role in the expansion of the tourist sector. The impact of word of mouth would be enhanced for the advantage of both customers and tourism businesses. Moreover,

social media are vital instruments for destination branding, particularly in the promotion of a place's identity and brand to inhabitants and tourists by local governments and DMOs. With the help of social media, the image of cities and destinations, as well as their tourism attractiveness, smartness, sustainability, and technology growth can be built. However, some challenges should be taken into consideration while engaging social media in terms of satisfying travellers' expectations. To give an insight into the situation and look into how smart tourist destinations may be potentially improved the tourism experience, further study with qualitative and quantitative research methods will provide in-depth multimodal observation.

9. Conclusion and Recommendation

To sum up, the pandemic has negatively impacted the overall tourism industry, especially the traditional tourism industry, but promoted ST to some extent, which pushed people to perceive ST. It has promoted the modes and evaluation indices of smart tourism; people's travel choices, preferences and overviews have been changed too. The development of ST has greatly reduced the negative impact of the pandemic and improved reliance on Smart applications, which build tourists' trust. Since it demands the integration of information from many relevant domains, the digital transformation of tourism destinations in the post-Covid age is still a topic in tourism research about which there is relatively little academic study. Furthermore, this study's research is restricted, with only a few instances based on digital transformation and smart solution implementation; that is why it is also worth noting that a tourism destination's digital transformation should never be the end aim. In the meantime, technology should guide tourist attractions to achieve their objectives, such as better destination management, sustainability, competitive pressures, improved tourism experience, and promotion of local well-being, creating new research areas for the prom

otion of new innovation. Though, ST evolved in tandem with societal technology advancements. It makes a significant contribution to today's tourist experience, with dedicated mobile applications being one of the most popular types.

According to our research in the literature review, the following are highly significant factors to consider while creating an application. Several concepts have been analysed, such as how the adoption and applicability of ST are crucial, especially for emerging countries measured through ToM and tourists' behaviour. To summarise, the purpose of this study was to investigate the impact of ST applications on the links between ToM, destination image, and behavioural intention. The efficiency of ST applications and ToM evaluation throughout the journey period influence tourist perceptions of destination image and behaviour intention. Furthermore, by recognising the responsibilities of ST cities, this research offers a long-term solution for designing a sustainable city that considers both inhabitants' and visitors' quality of life and experience.

The focus of this study shows the state of the ST literature by critically assessing its topics and knowledge areas. It has made a contribution to the field by presenting a current picture of the existing knowns and uncovering unknowns in ST. First of all, the fundamental key to sustainable ST is creating a big data platform that allows visitors to get information about destinations and make suitable decisions quickly. The conveyance of information: enough travel information and relevant content and data correct, up-to-date, and trustworthy should be responsive to visitors' requirements and demands at the appropriate moment.

However, there are some weaknesses, such as not having a stable Internet connection, which was mentioned as a big challenge that does not allow to enhance customers' satisfaction through virtual tours or ST applications.

Such limitations should be eliminated by improving the quality of the Internet connection and providing access, which prevents tourist products' intangibility, inseparability, fluctuation, and

uncertainty. The cost of Internet connection which was observed in the case of Uzbekistan, should be decreased in order to give a chance of availability. To implement smart digital applications in tourism destinations, internet infrastructure, device costs, a lack of development of all tourism activities and businesses, and a lack of awareness among tourists and the community should be taken into consideration before creating Smart cities. ST infrastructure is necessary to develop in Uzbekistan properly though it can be observed that some initial steps have been already applied in the case of Nurafshon city; however, it has not been used and recognised by the population due to a lack of awareness of ST. The systematic and broad organisation, exchange, and use of tourism data for value generation which is still in its early stages. While smart technology serves a mediating role in nurturing tourist well-being, developers must envision smart technologies that can encourage tourist well-being and consider how tourists' feelings about these technologies would impact their adoption. As the globe, and particularly the tourist sector, moves toward a digital environment, the role and perception of ST have been extensively researched and examined, though due to the fact that there are not enough data on ST in Uzbekistan, survey, tracking and other data collection procedures can be used in future research. The quantitative research will show the authentic picture of people's experiences and behaviour while using ST. As a result, future study may use these features to measure visitor behaviour and preferences for smart experiences. Furthermore, future research might look at whether there are any other aspects that influence visitors' behaviour while using ST through ToM concept to have better knowledge.

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