ROLE OF SMART CITY MISSION IN THE DEVELOPMENT OF SMART TOURISM DESTINATIONS IN INDIA: A NEED OF AN HOUR AFTER THE COVID-19 PANDEMIC

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ABSTRACT

The tourism industry is facing serious and long-term effects of the COVID-19 pandemic globally which has resulted in a tremendous monetary loss to the tourism economy. The rigorous research studies have highlighted the need for a big shift in the industry in the application and innovation of tourism technology. Indian tourism industry which is also going through the negative impacts of the pandemic can rise above by developing smart tourist destinations in the country. Thus, this exploratory research aimed to analyse the smart city mission initiatives for transforming Indian tourism destinations into a smart destination. The analysis put forward that many crucial tourist cities are selected for the smart city mission of India. Further the initiatives of the smart city mission will help transform these destinations into smart destinations which will improve the destination competitiveness and support the revival of the industry from the pandemic effect. Further, suggestions are provided to gear up smart destination development in India. It will be a guiding note to destination developing and planning agencies.

INTRODUCTION

There is a positive relationship between social stability and tourism development (Wang et al., 2021). Unfortunately, the world has seen huge instability during and even after the COVID-19 pandemic. Globally till mid-January 2022, there have been 326,279,424 confirmed cases resulting in 5.5 million deaths (WHO, 2022). This pandemic has affected tourism demand at large for mainly because of two reasons, one is that tourists are refraining to avoid infection and travel restrictions imposed by governments which includes border closures and lockdown to reduce transmission (Wang et al., 2021). Due to this, tourism has been identified as a susceptible industry during the pandemic (P. Lee et al., 2020).

The worst effects of COVID-19 have been witnessed in India during May 2021 when three cases per second and three deaths per minute were observed (UNICEF, 2021). In response to control the spread, the country implemented visa restrictions for high COVID-risk countries and advised home quarantine for asymptomatic travellers entering India. From 25th March 2020, the country imposed a complete 21-day lockdown, including the closure of internal transport, recreational places, events and gathering and many more (Ghosh et al., 2020). Thus, the pandemic impacted the tourism industry radically and pushed the people, involved directly or indirectly in the tourism industry, into vicious circumstances. The Ministry of Civil Aviation of India witnessed the cancellation of almost 30% of international tours immediately (Jamal et al., 2020). Foreign tourist arrival radically declined to 1.52 million in the year as compared to 2.74 million in the year 2020 (MoT GoI, 2022). The Federation of Associations in Indian Tourism & Hospitality (FAITH) has estimated losses of INR 5 lakh Crore to INR 10 Lakh Crore (PTI, 2020).

Thus, the COVID-19 pandemic put an unavoidable halt on travel and an urge for limited human interference, which resulted in the radical and rapid adaption of technology. It became mandatory for industry stakeholders to invest in technological innovation to survive in the future (El-Said & Aziz, 2021). Thus, it is found that the research literature is pointing out the need for the adoption of technology and advancement in innovation to go beyond this situation. In this vein, the present research studied the smart city mission of India and analyse the possibilities and challenges of the development of smart destinations in India. Further, the framework was provided to transform these smart cities into world-class smart destinations.

REVIEW OF LITERATURE

SMART TOURISM DESTINATION

The word "Smart" is a new trending word to describe solutions, procedures, functions, and developments fueled by technologies that are heavily dependent on sensors, big data, cloud computing, ICT, robotics, and many other innovations (Chavan & Bhola, 2014; Gretzel et al., 2015; Ivars Baidal et al., 2017; Tourism et al., n.d.). The concept of Smart Development focuses on improving the quality of life of people in three dimensions; environment, economy, and equity (Randhawa & Kumar, 2017).

The concept of a smart city was introduced through Kyoto Protocol signed by 192 all over the world. The main purpose of the protocol is to limit CO_2 emissions for environmental protection(Randhawa & Kumar, 2017). The concept of a smart city introduced the concept of a smart destination in the field of tourism. The development of smart destinations contributes towards smart services and destination sustainability (González-Reverté, 2019).

There is no uniquely identified and commonly accepted definition of a Smart Tourism Destination. The researchers define and conceptualize the term in diverse ways, however, most of them primarily emphasise the role of ICTs (Tyan et al., 2020). The origin of ICT ignites a thought of smart cities & smart tourism destinations (S. Kumar, 2016). López de Ávila (2015) has defined the smart destination as "*an innovative tourist destination, built on an infrastructure of state-of-the-art technology guaranteeing the sustainable development of tourist areas, accessible to everyone, which facilitates the visitor's interaction with and integration into his or her surroundings, increases the quality of the experience at the destination, and improves residents' quality of life*." Smart tourism represents the integration of ICT and tourism which denotes the renovation of tourism through technology (Lee et al., 2020).

Several tourism destinations around the world have started implementing smart city projects aimed at improving quality of life and destination sustainability which motivated the emergence of the concept of a smart tourism destination (STD)(Cavalheiro, Mariana Brandão Joia et al., 2021; Randhawa & Kumar, 2017). It focuses on providing smart infrastructure and utilities to urban towns with the integration of modern technology (ICT) which provide a different kind of experience and joy to tourists (JASROTIA & GANGOTIA, 2018; Randhawa & Kumar, 2017). Innovation and sustainability are the pillars of the development of STDs (Gretzel & Jamal, 2020; Vargas Sánchez, 2016). The development of smart destinations involves minimal impacts on the surrounding environment and society through responsible behaviour which includes developing the local economy and society (A. Kumar, 2020).

Besides the infrastructural benefits, smart technologies provide supplementary advantages like the ease in tourist mobility, increase in the discoverability of destination areas, facilitate the accessibility of non-tourism infrastructure, increase the competitiveness of the place and lead towards better tourist satisfaction (Gajdošík, 2018; Gretzel & Jamal, 2020).

SMART CITY MISSION AND ITS ROLE IN SMART TOURISM DEVELOPMENT IN INDIA

India, being a well-known country for its rich culture and diverse tourism products, attracts many foreign and domestic tourists (Satghare et al., 2017). The country, being a developing nation (Chaudhary & Walia, 2021), has experienced speedy urbanization significantly in its Tier-1 cities. The adverse effect of this development has been seen in the standard of living in such areas and hence various initiatives have been taken up by the Government of India to overcome these challenges.

The smart city mission is one of the initiatives, introduced by the government of India on 25th March 2015, to have smart but sustainable development in the cities of India (Chaudhary & Walia, 2021; Randhawa & Kumar, 2017). According to the Ministry of Housing and Urban Affairs (n.d.), the main purpose of the mission is to improve the economy and quality of life of the residents. In the initial phase, approximately one hundred cities were selected for execution of the mission in the five-year plan of 2015 – 19 through the two-stage selection procedure (Intra-state level selection and National level). It is assumed that the mission will provide the framework for such development which will be later applied to all four thousand cities of the country. The Indian Government has announced to aid one hundred smart cities in the respective Five-Year Plan and the process for selection is based upon a methodology that is divided into two stages: selection of cities.

According to Randhawa & Kumar (2017), smart tourism has greater potential in India as it is one of the fastest-developing countries. Further, the huge technological evolutions in upcoming years within the country will create a favourable environment for such developments in the tourism industry (Choudhury et al., 2018). The earlier literature has found that there is a strong link between the development of smart cities and smart tourism destinations (Huertas et al., 2021; Jasrotia & Gagotia, 2018).

Unfortunately, tourism researchers criticized the smart city mission due to the absence of a strong conceptual ground and an unidentified development model (Randhawa & Kumar, 2017). Ministry of Housing and Urban Affairs (n.d.) stated that the concept of a smart city varies from region to region and hence there is no universal definition. Thus, it is important to identify and standardize the concept in the Indian context. Further, it is highlighted that the government

lacks concerns towards the essential dimension of the natural environment in the mission hence there is a dire need to design and implement sustainable plans for the development of these smart cities, which will result in the development of smart destinations in India (Jasrotia & Gagotia, 2018; Randhawa & Kumar, 2017).

Prominent studies on the topic of Smart destinations in India were conducted by S. Kumar (2016), A. Kumar (2020) (studied Ahmedabad city), Sahoo et al. (2017) and Choudhury et al. (2018) (studied Bhubaneshwar city) etc. It is observed that very scarce literature is available on the topic of smart city missions and smart tourism development in India. In this vein, to fill this void, the present exploratory research aimed at studying the national smart city mission in the context of the development of smart tourism destinations.

RESEARCH METHODOLOGY

The exploratory research is based on qualitative analysis. The study aimed:

1. To study the Smart city mission of India
2. To analyse its role in the development of smart tourism in India

To achieve the said objectives following research questions were set:

1. Which crucial tourism cities are covered in the smart city mission of India?
2. Which parameters of the smart city mission are linked to smart tourism development in India?

The study is grounded on secondary data collected from the official website, news articles, reports, research papers etc. The temporal scope of the study is from 2015 to 2022.

FINDINGS

Table 1: List of cities and their tourism importance

Agartala	Erode	Lucknow	Shimla
Agra	Faridabad	Ludhiana	Shivamogga
Ahmedabad	Gandhinagar	Madurai	Silvassa
Aizawl	Gangtok	Mangaluru	Solapur
Ajmer	Greater Warangal	Moradabad	Srinagar
Aligarh	Guwahati	Muzaffarpur	Surat
Allahabad	Gwalior	Nagpur	Thane
Amaravati	Hubli-Dharwad	Namchi	Thanjavur
Amritsar	Imphal	Nashik	Thoothukudi
Aurangabad	Indore	Naya Raipur	Tiruchirappalli

Bareilly	Itanagar	New Delhi	Tirunelveli
Belgaum	Jabalpur	New town Kolkata	Tirupati
Bengaluru	Jaipur	Panaji	Tirupur
Bhopal	Jalandhar	Pasighat	Tumakuru
Bhubaneshwar	Jammu	Port Blair	Udaipur
Biharsharif	Jhansi	Puducherry	Ujjain
Bilaspur	Kakinada	Pune	Vadodara
Chandigarh	Kalyan-Dombivali	Raipur	Varanasi
Chennai	Kanpur	Rajkot	Vellore
Coimbatore	Karimnagar	Ranchi	Visakhapatnam
Dahod	Karnal	Rourkela	
Devangere	Kavaratti	Sagar	
Dehradun	Kochi	Saharanpur	
Dharmashala	Kohima	Satna	
Diu	Kota	Shillong	

Data Source: (Ministry of Housing and Urban Affairs, 2022) retrieved on November 11, 2022
Note: The names of the cities present on the official website of the smart city mission are listed only.

The above list includes the names of several very well-known and heritage tourist destinations like Agra, Aurangabad, Allahabad, Amritsar, Bhubaneshwar, Jaipur, Gwalior, Indore, Jhansi, Lucknow, Madurai, Surat, Thanjavur, Visakhapatnam, Udaipur, Ujjain, Varanasi, Visakhapatnam etc. The cities are endowed with many world heritage sites. The list also includes crucial hill stations like Dharamshala, Shimla, Shillong, Dehradun etc. The inclusion of the Tech-city of Chennai, Pune and Bengaluru, the wine city of Nashik, planned city of Chandigarh are helpful in the development of business tourism. Further, Panaji, Jammu, and Sri Nagar, with the inclusion of many north-eastern cities could gear up the tourism development in the region. Thus, the development of smart mechanisms in these cities would bring forward drastic changes in them contributing towards smart tourism development.

INITIATIVES

The main objective of the Mission is – "to promote cities that provide core infrastructure, clean and sustainable environment and give a decent quality of life to their citizens through the application of 'smart solution'"(Ministry of Housing and Urban Affairs, n.d.). Thus, the mission aimed at infrastructural development, sustainability, quality of life of citizens and bringing up smart solutions.

Further, the following table listed the core infrastructure elements in a Smart City proposed by the Ministry of housing and urban affairs (2015) and their significance from the aspect of smart tourism (Table 2):

Table 2: Core infrastructure elements and their significance in the development of smart tourism

SN	Core infrastructure elements	Significance for smart tourism
1.	Adequate water supply	The efficient management of water resources is key to ensuring the sustainability of tourism destinations (Cole et al., 2020)
2.	Assured electricity supply	The critical component for the tourist they consume directly or indirectly (C. G. Lee, 2013)
3.	Sanitation, including solid waste management	The sector is particularly intensive in solid waste generation and improper solid waste management portrays a negative image of the destinations (C. G. Lee, 2013; P. Lee et al., 2020)
4.	Efficient urban mobility and public transport	Developing public transport and tourism are interconnected (P. Lee et al., 2020)
5.	Affordable housing, especially for the poor	No direct connection but it can help improve the aesthetic view of the city
6.	Robust IT connectivity and digitalization	As ICTs have a significant role in the development of smart tourism (Buhalis & Amaranggana, 2014; Ivars Baidal et al., 2017; P. Lee et al., 2020)
7.	Good governance, especially e-Governance and citizen participation	The smart destination must be guided by good governance and policy for sustainability (Gretzel & Jamal, 2020; P. Lee et al., 2020)
8.	Sustainable environment	Sustainability is a vital component of smart tourism development (González-Reverté, 2019; A. Kumar, 2020; Randhawa & Kumar, 2017)
9.	Safety and security of citizens, particularly women, children, and the elderly	Safety and security are key elements of smart tourism (Ruiz-Sancho et al., 2021)
10.	Health and education	The research identified a connection between smart destinations (Göktaş Kulualp & Sarı, 2020)and smart health systems Developing smart health and education systems could result in positioning the destination as a health and education tourism destination.

Data Source: Developed by the researcher

Thus, the analysis revealed that out of ten core infrastructure components nine are directly supporting the development of smart tourism at the destinations. The development of these components will boost the smart destination development in the city, resulting in the transformation of the Indian tourism industry.

Further, the mission looks forward to inclusive development by creating replicable models which will apply to other cities. This will lead to the development of overall tourism destinations in the country. Sustainable and inclusive development will be helpful for the survival of the industry in the post-pandemic period.

LIMITATION AND FUTURE SCOPE FOR FUTURE RESEARCH

The present research is based on secondary data, therefore the collection of primary data through the surveys of the residents, and administrators of the selected cities could portray the actual picture of the development. Further, the interviews of officials of the smart city mission will clarify the true progress and plans related to the development of smart cities. Further, a review of present progress and its link to smart tourism development can be conducted.

CONCLUSION

The tourism industry is facing big challenges during the post-pandemic period which are related to revival strategies, rebranding strategies, process transformation, digitalization, application of smart technologies and so on. The Indian tourism industry which has witnessed a huge effect of COVID 19 is in a state of revival. The earlier literature and the industry experts are suggesting destinations apply smart tourism strategies for reducing human interference and increasing sustainability practices in the industry. In this vein, the present research studied the role of the smart city mission of India in the development of smart tourism.

The qualitative study analyzed the city selected for the smart city mission and studied the core infrastructural element of the mission. The study found out that the list of cities includes very crucial tourism destinations. The development of smart infrastructure at these places will surely pave the path towards smart tourism. Further, the core infrastructure elements are also strongly interrelated to smart infrastructure, like mobility and public transport, IT connectivity, safety and security mechanism, sustainable environment, etc., needed for smart destination development.

To conclude, the smart city mission, if executed full-heartedly, can surely lead the smart tourism development in India. Most of the projects under the mission have deadlines between 2019 to 2023. Presently, the government is working on almost 140 cities in the country and Further from the year 2022 the government is thinking of turning the mission into a movement with the name of Smart city mission 2.0. The model developed from these 140 cities will be applied to all four thousand cities in India. So, we can hope that in the coming years, there will be a strong boost to the development of smart tourism in the country.

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