



MANIFESTING SMART TOURISM DESTINATIONS A STUDY BASED ON SELECTED HIMALAYAN CITIES IN INDIA

Aruditya Jasrotia^a , Amit Gangotia^b 

^a Amity University (Noida, Uttar Pradesh, India), Amity Institute of Travel and Tourism; <https://orcid.org/0000-0002-8274-5609>;
e-mail: arudityajasrotia@gmail.com

^b Central University of Jammu (India), Department of Tourism and Travel Management; <https://orcid.org/0000-0002-7025-4589>;
e-mail: amitgangotia@gmail.com

How to cite (APA style): Jasrotia, A., & Gangotia, A. (2023). Manifesting smart tourism destinations: A study based on selected Himalayan cities in India. *Turizm/Tourism*, 33(2), 43–53. <https://doi.org/10.18778/0867-5856.33.2.04>

ABSTRACT

In urban planning, the term smartness is considered as a philosophic dimension which enables smarter strategic decisions and directions. The involvement of information technology in the functioning of the daily life of cities is directed towards the development of smart cities. Smart tourism destinations can also implement smartness by employing suitable tourism applications within a smart city. The purpose of the study is to explore the enabling factors for establishing smart tourism destinations in the Indian Himalayas. This research used a qualitative methodology and conducted interviews with relevant stakeholders from the study areas, Jammu and Dharamshala. The data collected were recorded, transcribed and coded with the help of NVivo 12, in order to carry out thematic and content analysis. The findings of the study showcase that community welfare, information communication technology, quality of life, sociocultural heritage, stewardship, sustainable development and tourism resources are the enabling factors for smart tourism destinations in the context of the selected Himalayan cities in India. This study will be beneficial for destination managers for assessing destination smartness, and further, for researchers who want to study smart tourism destinations.

KEYWORDS

smartness, smart tourism, smart tourism destinations, tourism planning, Himalayan cities

ARTICLE INFORMATION DETAILS

Received:
19 January 2023
Accepted:
21 July 2023
Published:
31 October 2023

1. INTRODUCTION

In general, smartness is the ability to understand and solve problems using information technology. However, in reality smartness is a confusing term and is still fuzzy. 'Smart' has become a buzzword and is often associated with technological developments. Even though it is well known by practitioners and researchers, there is still a lot of curiosity amongst

researchers about its application in several research areas. According to United Nations World Tourism Organization (UNWTO, 2015, p. [1]), tourism is "a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes". Considering the importance of information in tourism it is not astounding to witness the application of the concept of 'smart' in the tourism

industry. Enabling smartness in tourism destinations means that they need to create an information and communication technologies (ICT) enabled platform to facilitate information exchange on tourism activities amongst stakeholders which can improve their decision-making (Buhalis & Amaranggana, 2014). A major challenge in the tourism industry is the existence of several stakeholders with different interests, therefore bringing smartness to a tourism destination is necessary. Smart tourism destinations (STDs) are advantageous in the tourism industry because they enable the transfer of valuable information for tourists and tourism organizations through a centralized platform (Femenia-Serra, 2018; Femenia-Serra & Ivars-Baidal, 2018). The true essence of such destinations is using technology to provide a framework to facilitate multiple visualizations in a shared direction.

Destinations should adopt bottom-up approaches in which technological platforms provide personalized services to meet local needs (Neirotti et al., 2014). 'Smartness' in its true sense means the dynamic sharing of knowledge for a social structure that is reinforced by an environment which is always adapting and learning (Buhalis & Amaranggana, 2014; Gretzel et al., 2016). Today in the tourism industry it is important to get timely feedback to give appropriate solutions for visitors. Monitoring and engaging with their human capital is equally important in the hospitality industry. Information can be used to recognize difficulties as well as provide individualised solutions to solve them. STDs can attain an understanding of tourists and their preferences and needs. Vigorous interaction between service providers and tourists is vital to provide products that are most suitable for their needs. This engagement will also assist service providers to innovate and offer better-quality services (Schaffers et al., 2011). STDs can enable smartness by employing suitable tourism-based smart applications with smart city components (Cohen, 2014; Jovičić, 2019). From the traditional understanding of tourism destination to an STD (Jovičić, 2019) the actual idea behind STDs is to concentrate on the needs of tourists by focusing on combining ICT with the environment of the tourism destination in order to enable enhanced tourism service quality (Buhalis & Amaranggana, 2014). Boes et al. (2016) discussed the concept of establishing STDs with concepts that enable competitiveness, destination sustainability and comprehensiveness on the basis of the concept of smart cities. The objective of this study is to explore the enabling factors for establishing STDs in Indian Himalayan cities. The following section encompasses the existing literature concerning STDs and their various facets in the modern world. After a literature review, the research methodology, data analysis and consequent results have been delineated. Finally discussion based on the findings, conclusions and future research are outlined.

2. LITERATURE REVIEW

2.1. SMART CITIES AND SMART TOURISM

One of the most widespread changes in the 21st century is the explosion of ICTs. The high-tech progressions of the last few years have not just created a great impact on people, societies and businesses in their daily urban lives but also particularly in terms of tourism development (Gretzel et al., 2015). The revolution in mobile technology, and specifically the increasing popularity of smartphones and their several uses in enhancing travel experiences (Wang et al., 2012), is notable in this context. Advances in wearable technologies and augmented or virtual reality are expected to further push the boundaries of what data can be collected and how it can be utilized (Tussyadiah et al., 2018; Wise & Heidari, 2019). In general, 'smartness' is the ability to understand and solve problems using information technology. 'Smart' has emerged as a popular term which stands for social, infrastructural, technological and economic developments supported by smart technologies that include sensor technology, beacons, big data, mobile applications and several other ways to connect people with useful information. In the context of physical infrastructure, the emphasis is on muddling the boundary between the digital and physical world by enabling technology integration, e.g. smart homes, smart streets, smart lighting, smart transportation (Hwang et al., 2015). According to google trends, smart cities are a massive hub of human and social activities which aim to sustain and support people and the environment surrounding them. Intense business competition, the rise in global population, all kinds of pollution and various other challenges in today's world have forced cities to work in the direction of maintaining sustainability and competitiveness. There is no doubt that cities are the future of mankind. There has been a sudden rise in online searches for terms like 'smart cities' and 'smart tourism' since 2014 which proves that people are interested in these concepts. Indeed, governments around the world are investing heavily in smart city projects and there is increasing interest in harnessing such investments for tourism purposes. The conceptualization of the term 'smart city', varies from city to city and country to country, depending on the level of development, willingness to change and reform, and the resources and aspirations of city residents. Many definitions of smart cities exist. A range of variants are also obtained by replacing 'smart' with 'intelligent' or 'digital'. The term 'smart city' is used in ways that are not always the same. Smart cities are emerging all across the globe focusing on establishing smart infrastructure. Saunders and Baeck (2015) described the essentials of smart cities as a collaborative economy (i.e. smarter

usage of resources, crowdfunding) and collective intelligence (i.e. platforms to make smarter decisions). Smart cities aim to infuse intelligence into each part of the infrastructure of a city to solve urban problems. These are efficient cities with a futuristic approach towards their economy, people, governance, mobility, environment and quality of life. Smart cities use technology with other organizational and planning aspects to speed up bureaucratic processes and help find new innovations and solutions to city problems and challenges (Giffinger et al., 2007; Kanter & Litow, 2009). Considering the importance of information in the tourism industry and the dependency on big data and ICT (Benckendorff et al., 2014; Gretzel et al., 2015; Werthner & Klein, 1999), it will be right to accept the idea that smartness needs to be practiced within tourism destinations. In the context of tourism, smart technologies are altering tourist experiences and are engendering innovative models in tourism businesses (Shafiee et al., 2019). In the opinion of various researchers, the concept of smart tourism has evolved from the most modern concept of e-tourism. The implementation of ICT has led to a manifestation of e-tourism which includes central booking and global distribution systems (Buhalis, 2003; Gretzel et al., 2020; Werthner & Ricci, 2004) are a few examples. Traditionally, a large proportion of tourism researchers have been practicing survey-based and statistically driven studies that seek result-oriented findings but smart tourism summons researchers to acknowledge the exemplar shift that has been underway in tourism research (Hollinshead, 2004). The concept of smart tourism is without doubt a unique step towards the progression of ICT in the tourism industry. The term smart tourism has been added to cities (i.e. smart cities) to describe endeavors aimed at using innovative technologies to attain optimization of resources, effective and unbiased governance, sustainability and improved quality of life. Smart tourism is a promising scenario that results in more convenient, safe, exciting and sustainable living spaces for both residents and tourists, more personalized and therefore more relevant tourism experiences (Gretzel et al., 2016). Although, it cannot be achieved only through innovative technological advances but through the interconnection, synchronization and concerted use of different technologies which enable smartness.

2.2. SMART TOURISM DESTINATIONS

Until now the available literature on smart tourism destinations (STDs) advocates that they use ICTs to enhance the production and development of tourism processes. Traditionally, tourism destinations are a combination of various services and it is difficult to manage them. STDs require the development of attractions, accessibility, amenities, available packages,

activities and ancillary services. It is necessary to add value to the experience of tourists in a tourism destination (Buhalis, 2000). Further, smart cities and STDs can raise their attractiveness through the employment of technologies to improve their overall tourism experience (Ritchie & Crouch, 2005). The foremost importance in any STD should be given to implementing a demand and supply perspective. In other words, improving the tourist's travel experience and offering smart platforms to collect and dispense information amongst local stakeholders (Nam & Pardo, 2011). The actual idea behind STDs is to keep an emphasis on the needs of the tourist by merging ICT with casual culture to enhance service quality in the destination and to enhance its management. However, diverse proceedings and actions have been categorized as a part of smart tourism which has resulted in the misuse of the concept (Li et al., 2017). Hence, it can be said that STDs are places utilizing available technological tools and techniques to enable demand and supply to co-create value, pleasure and experiences for the tourist.

Consequently, STDs can be described as those applying existing technological apparatus and procedures to empower demand and supply to further co-create value, enjoyment and unique experiences for the tourist and profit generation for tourism organizations (Wang, 2013). Establishing STDs from the bottom necessitates authorities to positively involve local people to ensure community participation in developmental plans. The key behind the transformation of a tourism destination into an STD is widespread access to up-to-date information. In order to achieve this goal, tourism destinations must offer open access to information and unrestricted data through cohesive public-controlled operating systems and avoid merchant monopolies (Zygiaris, 2013). Additionally, to enable smartness in a tourism destination it is necessary to connect the relevant stakeholders through a technological platform. Information relating to tourism activities can be shared on such a platform (Buhalis & Amaranggana, 2014). Further, Buhalis and Amaranggana (2014) mention that in order to create true data openness in STDs, destination authorities must guarantee that all kinds of information generated from any type of tourism-related application should be available without supplementary cost. Hence, smart destinations fall within the wide-ranging concept of a smart tourism ecosystem, in which is created an amalgamation of smart technologies and smart cities. The smart tourism ecosystem nurtures new-fangled business models, new communication platforms and even new ideas for tourism businesses to ensure a long life-cycle for the tourism destination. STDs can be explained as a tourism system that utilizes smart technologies in producing, handling and distributing intelligent

tourism services to tourists and is branded by rigorous co-creation of value and information sharing (Masseno & Santos, 2018). It is evident that the amalgamation of smart technologies with tourist activities is one of the significant features of an STD (Gretzel et al., 2015). In the context of tourism, smart technologies are changing consumer experiences and are generating creative tourism business models. In many ways, the concept of smart tourism can be perceived as a logical evolution from traditional tourism to the most modern concept of e-tourism. Consequently, STDs can be perceived as places utilizing available technological tools and techniques to enable demand and supply to co-create value, pleasure and experiences for the tourist and wealth, profit, and benefits for organizations and the destination.

3. METHODOLOGY

In the pursuance of the research objectives, the present study utilizes a qualitative research methodology. Qualitative research provides a subjective understanding of the respondents which helps to give deeper insights into the phenomenon and reaches areas other research methods cannot (Berkwits & Inui, 1998). The data was collected with the help of a semi-structured questionnaire for interviewing the respondents of the study. The interviews were conducted with various relevant stakeholders in Dharamshala and Jammu who belonged to private as well as government sectors and including tourism academics. Further, a semi-structured questionnaire was chosen for this study as it allows for open-ended responses from participants providing in-depth information and encouraging two-way communication which is suitable for the purposes of the study. A total of 30 people were interviewed. After careful sorting and evaluation, some interviews were found unsuitable for data analysis as the answers were vague and the quality of data was low. Finally, 26 interviews were found suitable. Sample size cannot be determined in advance in a qualitative study. It depends on the complexity of the inquiry and the saturation point at which no new information can be obtained from the respondents. For developing a 'richly textured' understanding of issues larger samples are required, that is at least 24 interviews (Hennink & Kaiser, 2020). The data sampling technique used was purposive sampling where the researcher has the freedom to select the cases according to the objectives of the study (Saunders et al., 2009).

The interviews were audio-recorded for the purpose of analysis and interpretation by the researcher. Interview is an apt technique to a researcher when seeking individual's experiences as it provides a deep

insight. The questionnaire was designed on the basis of the available literature, i.e. Buhalis and Spada (2000) and Tran et al. (2017), and discussions with various experts from the tourism industry and academia. The questionnaire based on the dimensions in Table 1, included 25 open-ended questions in order to get the required information from the respondents.

Table 1. Format of the questionnaire

No.	Dimensions	Number of questions
1	Smart attraction	4
2	Smart accessibility	3
3	Smart amenities	3
4	Smart ancillary	8
5	Smart activities	3
6	Smart available packages	4

Source: Buhalis and Spada (2000) and Tran et al. (2017).

4. DATA ANALYSIS AND INTERPRETATION

The data collected for the study was first checked for the sociodemographic profiles of the respondents and the results are shown in Tables 2 and 3 below.

Table 2. Sociodemographic profiles of the respondents

Sociodemographic profile		Number of respondents
Gender	male	15
	female	9
Age group	20–30	2
	31–40	7
	41–50	8
	51 and above	7

Source: authors.

Table 3. Employment profiles and the purpose of visit of the respondents

No.	Industry/field	Respondents
1	Public sector	7
2	Private sector	4
3	Academia	6

Source: authors.

Open coding was conducted as the first step of data analysis, after loading the transcripts into NVivo 12, which is concerned with identifying, categorizing,

labeling and describing text from the transcripts. The next phase is known as axial coding where researchers have to develop sub-categories, and open codes, which are interrelated, are assembled to create tentative statements of associations among phenomena (Tan et al., 2013). After that a selective coding process was administered as the final step which is more abstract in nature and resulted in integrating all the sub-categories into a core category.

After administering thematic analysis on the transcripts, 21 sub-categories were developed, and these were further reorganized into seven themes namely:

1. Community welfare.
2. Information communication technology.
3. Quality of life.
4. Sociocultural heritage.
5. Stewardship.
6. Sustainable development.
7. Tourism resources.

Theme 1: Community welfare

Local communities who frequently interact with tourists can be involved in capacity-building programs by local tourism authorities for dealing in a better way with visitors.

If we talk about rural areas, I believe they need to be more sensitized about how tourism can bring economic and social advantages to them.

Local communities definitely need to be made aware and educated, so that they can interact with tourists in a desirable manner. Workshops, local awareness programs etc. are a great way to educate the locals on this. We can create more jobs for locals by involving them on the organizing committees of such events.

Community welfare is a type of governmental backing for those living in a society. Community welfare can be provided to those of any income level, social status or background, but it is typically envisioned to guarantee that people are able to fulfill their basic human needs. Community welfare aims to ensure a basic level of well-being for citizens of a society which includes benefits like a free supply of food items, clothes and social services like education, healthcare, employment based training facilities etc. (Blank & Shapiro, 2001).

Theme 2: Information communication technology

We can go to the local community and involve them in activities like policy making, designing of packages and programs related to tourism. This will encourage them to participate in the co-creation of the city. Social media is a great way to bring the local community closer to both the public and private sectors.

We can motivate visitors to share their experience through social media.

I agree it's important to provide quick access to important information regarding activities and timetables etc. We can provide such information at arrival points, at tourism information centers or on official websites so that tourists have all the information they need.

One of the widespread and notable changes which has occurred in the 21st century is the explosion of ICTs which has completely revolutionized societies and daily life. The technological progressions of the last few years have not just greatly impacted governments, societies, businesses and people in everyday contexts in cities, but also specifically in terms of tourism development and management (Gretzel et al., 2015). ICTs in the setting of STDs aim to drive soft power through traveler connectivity (Womack, 2009).

Theme 3: Quality of life

Wherever I have been, I didn't find any medical facilities or dispensary available in the tourism attractions. At least, first aid services should be provided at each and every tourist attraction.

I think public transportation is sufficient here. Traffic management although is a problem for Dharamshala, being a tourist destination. Transportation is an important part of the tourism industry as transportation links tourists with various tourist attractions. In order to improve accessibility, we should focus on the improvement of the existing roads, construction of more roads, air transportation and local flight operations.

Events at state level can be managed but still the city requires convention centers and auditoria of large capacity.

Quality of life is an all-embracing term for quality in terms of various spheres of life. It is a typical level of living that comprises the hopes of citizens or society for a good life. These hopes or expectations are directed by the goals, values and socio-cultural context in which an individual lives. It is an idiosyncratic and multidimensional concept that describes a standard level for physical, emotional, material and social well-being. It further assists individuals or societies to measure or judge the different domains of their own lives. STDs apply the principles and strategies of the smart city to urban or rural tourism destinations which improves quality of life for the people. This includes not only control and making use of data collected from residents but also from tourists (Buhalis & Amaranggan, 2014).

Theme 4: Sociocultural heritage

I am sure you know that we don't have such platforms in Jammu. The effective way to enable cultural exchange is to make sure that we have space and people ready to indulge in cultural exchange and again awareness among locals and steps from the administration are required.

Well, we all know the condition of historic buildings in Jammu. I personally have been attending such meetings where the administration talks about plans to conserve the heritage of the city. But shamefully nothing solid has come out so far. The heritage buildings have become a hub for drug addicts and alcoholics. I won't name any names but unfortunately, we haven't been able to secure the premises of our heritage buildings. What's required is the seriousness and will to save our roots. We are nothing without our history and heritage.

Sociocultural heritage is passed on from one generation to another through parents, education, society, religion, traditions, friends, books, radio, television and movies etc. Cultural heritage refers to a communal bond which links us to a community. It signifies our roots, past, identities and our link to our history, to our present and the future as well. It encompasses social and cultural values and traditions passed down over several generations. It also includes the values, habits, attitudes, ideas, beliefs, monuments and buildings belonging to a particular community. STDs enable tourists to better communicate and interact with the surroundings of a destination while travelling and this further ensures the safeguarding of its heritage (Buhalis & Amaranggan, 2014).

Theme 5: Stewardship

The natural amenities are precious and diverse in Himalayan cities and we have unique flora and fauna. We need proper urban planning in order to make sure that nature is not affected by day-to-day activities and most importantly by tourism.

Tourism development can put pressure on natural and built amenities when the arrival of tourists increases in a destination. It can force local populations to compete for the use of critical resources. The administration should be seriously willing to make regulations and implement them and at the same time creating awareness among the masses.

While governance mostly deals with the proposal and enactment of laws to ensure a safe and productive society. Stewardship would be to make sure those laws are followed and adhered to by the governed. The term smart tourism has been embedded into cities to designate endeavors intended at using innovative technology to attain optimization of resources, effective and unbiased governance (Gretzel et al., 2016).

Theme 6: Sustainable development

The natural amenities and resources of the Himalayas are very rare and fragile. We have many lakes, forests, rivers and animals. This makes us more responsible for taking steps which are sustainable and eco-friendly. We cannot just intensively promote tourism here, rather we need to promote sustainable tourism. It's the only way to preserve Himalayan cities.

The Himalayas are rich in natural resources. Water, forests, flora and fauna are all abundant here. Due to the terrain they pack an incredible amount of biodiversity in a relatively small area. These are now under stress due to over-extraction. Conservation of these valuable resources is now crucial. The wise use, development and conservation of our natural resources is every individual's duty.

Sustainable development has emerged as a topic of interest in both academia and in private and public establishments (Rusandu, 2008). There is also a point of view that sustainable development depends on harmony with the necessities of the whole of human development and the ecological balance (Lélé, 1991). In other words, we can say that, the vision of sustainable development must be in accordance with combined economic growth, democracy, social justice, environmental protection and the rule of law. Sustainability and the preservation of nature are the sub-themes. Sub-domains, cultural, technological and political, of sustainable development have been considered too (James, 2014). Smart cities are an icon of a sustainable and livable city and similarly smart tourism destinations must be capable of guaranteeing the sustainable development of an area where tourism occurs (Schaffers et. al., 2011). The ultimate goal behind all these efforts is to enable resource availability and sustainability leading to an improved quality of life and visits (Buhalis & Amaranggan, 2014). Moreover, the Ministry of Urban Development in India, identifies the environment, social sustainability and competitiveness as the basic elements of smart cities that promote the quality of life.

Theme 7: Tourism resources

There are few agencies which spend time and energy in planning the packages but they are not sufficient of course. Enough attractions must be created in the city. We lag behind in lots of ways as far as packages and products are concerned. We ought to have new products which can appeal to all.

We need to identify other tourism attractions and we have to make service providers aware about them, so that they can add new attractions to already existing tour packages.

Tourism resources are natural and man-made creations which have the ability to attract tourists to a tourism destination. They are shaped in accordance

with the various physical and psychological needs of the tourists. In the form of a tourism product, tourism resources generally take the shape of cultural, ethnographic, social, artistic and ambient resources. It is important to facilitate well-organized and effective utilization of tourism resources and integrating tourism suppliers to make sure that the profits or benefits from tourism are equally disseminated through the local society (Buhalis & Amaranggana, 2014).

Moreover, 'attractions, information, facilities, services, locals, technology, events, platforms, transportation, traffic' are the keywords with the highest frequency. These also make up parts of the statements in open coding which have been later grouped into themes. Figure 1 presents a bar chart for the first 10 keywords with the highest frequency whereas Figure 2 includes all the 30 keywords extracted from the transcripts. It may be noticed that keywords like accessibility, amenities, internet, products etc. are important in terms of an STD, however their frequency is low. This may be due to the reason that respondents may not by chance have quoted them.

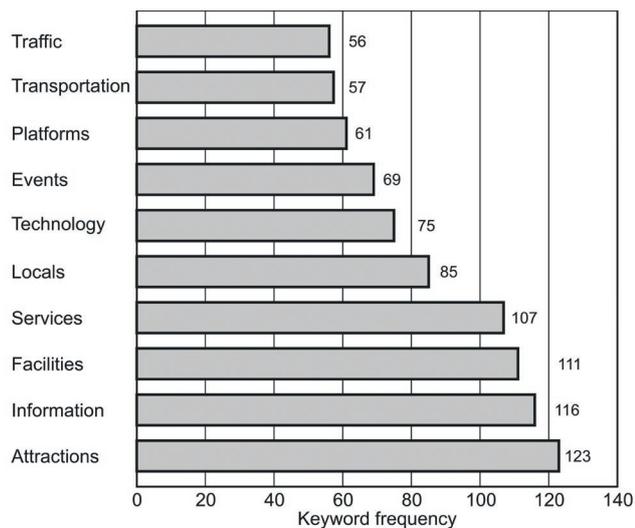


Figure 1. Presentation of important keywords obtained by content analysis
Source: authors



Figure 2. Word cloud of the important keywords obtained by content analysis
Source: authors

5. DISCUSSION

This study brings out the enabling factors which can create support for Himalayan cities in the course of becoming STDs. It can help the local administration and the government to act accordingly in order to make sure that these challenges are tackled and developmental policies related to smart tourism are successfully and effectively implemented in the study areas. The themes identified will be beneficial for tourism destination managers to appraise their smart development, and further for researchers who intend to work on smart destinations, especially in India. These themes can act a roadmap towards the concrete indicators to be appraised in a tourism destination to transform it into an STD. This can further help to evaluate the level of smartness of a tourism destination by the detailed examination of its real-world applications (Wang, 2013). The analysis of the required indicators will also help the destination management organization in the management of destination smartness. Finally, it is clear from the results of the study that STD plans must acknowledge and practice environmental and social sustainability and data management, which are not merely tendencies but also primacies for any tourism destination. It is necessary to change the existing infrastructure-oriented approaches towards service-oriented ones. The main components of the STD concept are investments in human and social capital, traditional transport and modern ICT infrastructure in order to meet the social, cultural, economic, leisure and personal needs of visitors (Zygiaris, 2013). Collaborations among different sections and levels of stakeholders would improve the implementation and effectiveness of a smart tourism strategy and planning by the government (Buhalis & Amaranggana, 2014). It is also important to facilitate direct contact between tourists and local people by encouraging the locals to take active part in tourism activities (Gretzel et al., 2016). Local government can conduct capacity building programs for local communities to instruct and encourage them to provide services like home stay facilities for tourists or workshops for starting tourism-related businesses etc. This would promote local culture, involve the visitors in experiential tourism and also reduce the adverse effects of new construction on the environment. Stakeholders and local communities should take care of the available tourism attractions and should also take an active part in the preservation of natural (Bhagsu Nag-Dharamshala) and man-made attractions (Mubarak Mandi-Jammu), so that authorities can get the required help to preserve those attractions. Along with the administration, tourism stakeholders should take steps to promote local art, crafts and souvenirs which symbolize their traditional art and bring tourists to such spots. This would not only

keep the local traditions alive but also help local people to sustain themselves economically through tourism.

'Smart tourism' is a novel term applied to represent tourism destinations globally (Hollinshead, 2004). It assists in overall city development and the enhancement of services in a number of ways. STDs can increase their competitiveness with the implementation of technologies to enhance tourism experiences. To ensure the success of a tourism destination it is important to focus on human resources and innovation in combination with cooperation and collaboration on local and regional levels (Masseno & Santos, 2018). Respondents are mostly in support of the smart tourism dimension, it is clear that there is significant potential in Jammu and Dharamshala to become STDs. This study could be a very important one in the existing growing popularity of STDs, as there is a need to prepare and execute sustainable plans which will lead the way to STDs in India.

6. RESEARCH LIMITATIONS

Firstly, as results are context-dependent, they are not generalizable. The present study is one among the very few undertaken in India on STDs which aims to understand how they can be established in the Himalayan belt. The lack of work on STDs in the Indian context was a challenge for this study. Due to limitations of time and money the study is restricted to only two Himalayan cities i.e. Dharamshala and Jammu. Time and difficulty to get appointments for interviews, have been the major limitations. People have limited time and it is hard to cover the desired questions and topics in a short period. In order to get appointments for some interviews it took many months. Language has been a communication barrier as some of the respondents could not speak good English and few chose to speak in Hindi. Such audio recordings were later translated into English for the data analysis. Travelling to different locations is a costly and sometimes money became a constraint when interviews were scheduled at different times and dates. In addition, interviews with the government officials were often interrupted because of phone calls and visitors, breaking the flow and continuum of the interview. Moreover, many respondents (especially government employees) hesitated to answer questions regarding governance and policy related problems in their respective cities. They often overlooked the obvious problems and spoke highly about the plans of the government. This, to an extent affects the quality of the data collected. Due to the paucity of time the study was restricted to the opinions of only certain stakeholders. The sample taken for the study were

from the public and private sectors and academics. Tourists and local residents could have been included in the study. Also, the sample size could have been increased.

7. CONCLUSIONS AND FUTURE RESEARCH

The debate on smart cities and STDs has been growing in the present time in India. However, the work of conceptualizing and defining an STD, what its constituents are and how to create one successfully, is still in progress. There is a need to understand the futuristic approach of transforming Indian smart cities into STDs. It is clear from the available literature that smart tourism is a fundamental part of smart city development and depends on infrastructure, utilization of information resources and the development of the intelligence industry. Various countries around the world are seeking to build smart tourism ecosystems on the basis of smart cities, but the complexity of the sector makes it difficult to go beyond technological advances. Cities in India are crowded with people and urban activities. An appraisal of some sectors at a city level is necessary to understand challenges in smart city development.

The development of smart tourism is already happening naturally from the excessive absorption of technology in the tourism industry. However, systematic and widespread coordination and exchange as well as the utilization of tourism data for value creation are still at a nascent stage. This work aims at studying the perspectives of key stakeholders towards the dimensions of STDs, which is the initial stage of contributing towards the tourism development of the study area. It is pivotal that at first the problems are clearly diagnosed so that appropriate solutions are provided for the improvement of policies, and this study identifies those which are to be rectified for the betterment of tourism in the study areas. The work contributes towards understanding situations and the views of respondents from public and private sectors and academics. It further contributes to identify enabling factors which can support Himalayan cities to become STDs so that the authorities can understand what is required there so that they can evolve in future towards smart tourism. This study also focuses on several popular aspects, including the utilization of smart applications which can be used for various functions, such as apps for parking or reservation of accommodation and the increasing involvement of citizens in destination planning.

This study has only touched on a very small aspect of the term 'smart tourism destination' and a lot of work can be done in this research area in India.

Future research can be improved by employing mixed methodology, multiple methods, quantitative study etc. to the perceptions of residents, in-depth interviews with tourists and focus groups with more experts in related fields that can cross-validate the findings achieved here. More stakeholders can be included in future studies (tourists, local residents etc.). This would make clear which group of stakeholders support which items of a STD. Also, it would be thought-provoking to perform a quantitative study on the perceptions of the residents (social capital) in relation to the 'smartness' of the destination. The area has been limited to only two cities, Jammu and Dharamshala, and this could be extended to other Himalayan cities for a broader view of the problems and challenges involved in smart tourism development. Further, there is scope to include more smart tourism dimensions and items in future studies which would provide a much broader scenario. Future studies could discover other factors influencing smart tourism development at Indian tourism destinations to make it smooth and sustainable. In the present scenario with growth in the popularity of smart cities in India, the need is to make and execute sustainable plans for the development of smart cities which will ultimately lead the way to STDs in India and across the world.

REFERENCES

- Benckendorff, P.J., Sheldon, P.J., & Fesenmaier, D.R. (2014). *Tourism information technology* (2nd ed.). CABL. <https://www.cabidigitallibrary.org/doi/book/10.1079/9781780641850.0000>
- Berkwits, M., & Inui, T.S. (1998). Making use of qualitative research techniques. *Journal of General Internal Medicine*, 13, 195–199. <https://doi.org/10.1046/j.1525-1497.1998.00054.x>
- Blank, R.M., & Shapiro, M.D. (2001). *Labor and the sustainability of output and productivity growth*. University of Michigan; National Bureau of Economic Research. <http://www-personal.umich.edu/~shapiro/blank-shapiro.pdf>
- Boes, K., Buhalis, D., & Inversini, A. (2016). Smart tourism destinations: Ecosystems for tourism destination competitiveness. *International Journal of Tourism Cities*, 2(2), 108–124. <https://doi.org/10.1108/IJTC-12-2015-0032>
- Buhalis, D. (2000). Marketing the competitive destination of the future. *Tourism Management*, 21(1), 97–116. [https://doi.org/10.1016/S0261-5177\(99\)00095-3](https://doi.org/10.1016/S0261-5177(99)00095-3)
- Buhalis, D. (2003). *eTourism: Information technology for strategic tourism management*. FT Prentice Hall.
- Buhalis, D., & Amaranggana, A. (2014). Smart tourism destinations. In Z. Xiang, & L. Tussyadiah (Eds.), *Information and Communication Technologies in Tourism 2014: Proceedings of the International Conference in Dublin, Ireland, January 21–24, 2014* (pp. 553–564). Springer. https://doi.org/10.1007/978-3-319-03973-2_40
- Buhalis, D., & Spada, A. (2000). Destination management systems: Criteria for success – an exploratory research. In D.R. Fesenmaier, S. Klein, & D. Buhalis (Eds.), *Information and Communication Technologies in Tourism 2000: Proceedings of the International Conference in Barcelona, Spain, 2000* (pp. 41–58). Springer. https://doi.org/10.1007/978-3-7091-6291-0_43
- Cohen, B. (2014, April 21). *The smart city wheel*. Smart Circle. <https://www.smart-circle.org/smart-city/boyd-cohen-smart-city-wheel/>
- Femenia-Serra, F. (2018). Smart tourism destinations and higher tourism education in Spain: Are we ready for this new management approach? In B. Stangl, & J. Pesonen (Eds.), *Information and Communication Technologies in Tourism 2018: Proceedings of the International Conference in Jönköping, Sweden, January 24–26, 2018* (pp. 437–449). Springer. https://link.springer.com/chapter/10.1007/978-3-319-72923-7_33
- Femenia-Serra, F., & Ivars-Baidal, J.A. (2018). Smart tourism: Implicaciones para la gestión de ciudades y destinos turísticos. In M.T. Cantó López, J.A. Ivars-Baidal, & R. Martínez Gutiérrez (Eds.), *Gestión inteligente y sostenible de las ciudades: Gobernanza, smart cities y turismo* (pp. 129–151). Tirant Lo Blanch. <http://hdl.handle.net/10045/84247>
- Giffinger, R., Fertner, C., Kramar, H., Kalasek, R., Pichler-Milanović, N., & Meijers, E. (2007, October). *Smart cities: Ranking of European medium-sized cities: Final report*. Centre of Regional Science (SRF); Vienna University of Technology. <https://doi.org/10.34726/3565>
- Gretzel, U., Fuchs, M., Baggio, R., Hoepken, W., Law, R., Neidhardt, J., Pesonen, J., Zanker, M., & Xiang, Z. (2020). e-Tourism beyond COVID-19: A call for transformative research. *Information Technology & Tourism*, 22, 187–203. <https://doi.org/10.1007/s40558-020-00181-3>
- Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015). Conceptual foundations for understanding smart tourism ecosystems. *Computers in Human Behavior*, 50, 558–563. <https://doi.org/10.1016/j.chb.2015.03.043>
- Gretzel, U., Zhong, L., & Koo, C. (2016). Application of smart tourism to cities. *International Journal of Tourism Cities*, 2(2), 1–4. <https://doi.org/10.1108/IJTC-04-2016-0007>
- Hennink, M.M., & Kaiser, B.N. (2019). Saturation in qualitative research. In P. Atkinson, S. Delamont, A. Cernat, J.W. Sakshaug, & R.A. Williams (Eds.), *Qualitative interviewing*. SAGE Publications. <https://doi.org/10.4135/9781526421036822322>
- Hollinshead, K. (2004). Tourism and new sense. In M.C. Hall, & H. Tucker (Eds.), *Tourism and postcolonialism: Contested discourses, identities and representations* (pp. 25–42). Routledge.
- Huang, X.-K., Yuan, J.-Z., & Shi, M.-Y. (2012). Condition and key issues analysis on the smarter tourism construction in China. In F.L. Wang, J. Lei, R.W.H. Lau, & J. Zhang (Eds.), *Multimedia and Signal Processing: Second International Conference, CMSP 2012, Shanghai, China, December 7–9, 2012: Proceeding* (pp. 444–450). Springer. https://doi.org/10.1007/978-3-642-35286-7_56
- Hwang, J., Park, H.Y., & Hunter, W.C. (2015). Constructivism in smart tourism research: Seoul destination image. *Asia Pacific Journal of Information Systems*, 25(1), 163–178. <http://doi.org/10.14329/apjis.2015.25.1.163>
- James, P. (2014). *Urban sustainability in theory and practice: Circles of sustainability*. Routledge.
- Jovičić, D.Z. (2019). From the traditional understanding of tourism destination to the smart tourism destination. *Current Issues in Tourism*, 22(3), 276–282. <https://doi.org/10.1080/13683500.2017.1313203>
- Kanter, R.M., & Litow, S.S. (2009). *Informed and interconnected: A manifesto for smarter cities* (Harvard Business School General Management Unit Working Paper, No. 09-141). <http://doi.org/10.2139/ssrn.1420236>
- Lélé, S.M. (1991). Sustainable development: A critical review. *World Development*, 19(6), 607–621. [https://doi.org/10.1016/0305-750X\(91\)90197-P](https://doi.org/10.1016/0305-750X(91)90197-P)
- Li, Y., Hu, C., Huang, C., & Duan, L. (2017). The concept of smart tourism in the context of tourism information services. *Tourism Management*, 58, 293–300. <https://doi.org/10.1016/j.tourman.2016.03.014>
- Masseno, M.D., & Santos, C. (2018). Privacy and data protection issues on smart tourism destinations – a first approach. In

- I. Chatziagiannakis, P. Novais, Y. Tobe, & O. Amit (Eds.), *Intelligent Environments: Workshop Proceedings of the 14th International Conference on Intelligent Environments* (pp. 298–307). IOS Press.
- Nam, T., & Pardo, T.A. (2011). Conceptualizing smart city with dimensions of technology, people, and institutions. In *Proceedings of 12th Annual International Digital Government Research Conference: Digital Government Innovation in Challenging Times, June 2011* (pp. 282–291). Association for Computing Machinery. <https://doi.org/10.1145/2037556.2037602>
- Neirotti, P., De Marco, A., Cagliano, A.C., Mangano, G., & Scorrano, F. (2014). Current trends in smart city initiatives: Some stylised facts. *Cities*, 38, 25–36. <https://doi.org/10.1016/j.cities.2013.12.010>
- Ritchie, J.R.B., & Crouch, G.I. (2005). A model of destination competitiveness. In J.R.B. Ritchie, & G.I. Crouch, *The competitive destination: A sustainable tourism perspective* (pp. 60–78). CABI Books. <https://doi.org/10.1079/9780851996646.0060>
- Rusandu, I. (2008). Probleme filosofice si metodologice ale dezvoltarii durabile (DD). *Revista de Filozofie, Sociologie si Stiinte Politice*, 3(148), 19–29. https://ibn.idsi.md/vizualizare_articol/13299
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Pearson.
- Saunders, T., & Baecq, P. (2015, June). *Rethinking smart cities from the ground up*. Nesta. https://media.nesta.org.uk/documents/rethinking_smart_cities_from_the_ground_up_2015.pdf
- Schaffers, H., Komninou, N., Pallot, M., Trousse, B., Nilsson, M., & Oliviera, A. (2011). Smart cities and the future Internet: Towards cooperation frameworks for open innovation. In J. Domingue, A. Galis, A. Gavras, T. Zahariadis, D. Lambert, F. Cleary, P. Daras, S. Krco, H. Müller, M.-S. Li, H. Schaffers, V. Lotz, F. Alvarez, B. Stiller, S. Karnouskos, S. Abessta, & M. Nilsson (Eds.), *The Future Internet: Future Internet Assembly 2011: Achievements and Technological Promises* (pp. 431–446). Springer. https://link.springer.com/chapter/10.1007/978-3-642-20898-0_31
- Shafiee, S., Ghatari, A.R., Hasanzadeh, A., & Jahanyan, S. (2019). Developing a model for sustainable smart tourism destinations: A systematic review. *Tourism Management Perspectives*, 31, 287–300. <https://doi.org/10.1016/j.tmp.2019.06.002>
- Tan, S.-K., Kung, S.-F., & Luh, D.-B. (2013). A model of ‘creative experience’ in creative tourism. *Annals of Tourism Research*, 41, 153–174. <https://doi.org/10.1016/j.annals.2012.12.002>
- Toppeta, D. (2010, October). *The smart city vision: How innovation and ICT can build smart, ‘liveable’, sustainable cities* (Think! The Innovation Knowledge Foundation Report 005/2010). SCRIBD. <https://www.scribd.com/document/306968058/Toppeta-Report-005-2010>
- Tran, H.M., Huertas, A., & Moreno, A. (2017). A new framework for the analysis of smart tourism destinations: A comparative case study of two Spanish destinations. In J.F. Vera-Rebollo, J.A. Ivars-Baidal, & M.A. Celdrán Bernabeu (Eds.), *Actas del Seminario Internacional “Destinos Turísticos Inteligentes: Nuevos horizontes en la investigación y gestión del turismo”*, Universidad de Alicante, 26 y 27 de octubre de 2017 (pp. 190–214). Universidad de Alicante. <https://doi.org/10.14198/Destinos-Turisticos-Inteligentes.2017.09>
- Tussyadiah, I.P., Wang, D., Jung, T.H., & tom Dieck, M.C. (2018). Virtual reality, presence, and attitude change: Empirical evidence from tourism. *Tourism Management*, 66, 140–154. <https://doi.org/10.1016/j.tourman.2017.12.003>
- United Nations World Tourism Organization. (2015). *Understanding tourism: Basic glossary*. https://webunwto.s3-eu-west-1.amazonaws.com/2019-08/glossary_EN.pdf
- Wang, D., Li, X.(R.), & Li, Y. (2013). China’s “smart tourism destination” initiative: A taste of the service-dominant logic. *Journal of Destination Marketing & Management*, 2(2), 59–61. <https://doi.org/10.1016/j.jdmm.2013.05.004>
- Werthner, H., & Klein, S. (1999). *Information technology and tourism: A challenging relationship*. Springer.
- Werthner, H., & Ricci, F. (2004). E-commerce and tourism. *Communications of the ACM*, 47(12), 101–105. <https://doi.org/10.1145/1035134.1035141>
- Wise, N., & Heidari, H. (2019). Developing smart tourism destinations with the internet of things. In M. Sigala, R. Rahimi, & M. Thelwall (Eds.), *Big data and innovation in tourism, travel, and hospitality – managerial approaches, techniques, and applications* (pp. 21–29). Springer. https://doi.org/10.1007/978-981-13-6339-9_2
- Womack, J. (2009, July 30). *The mind of lean manager*. Lean Enterprise Institute. <https://www.lean.org/the-lean-post/articles/the-mind-of-the-lean-manager/>
- Yoo, C.W., Goo, J., Huang, C.D., Nam, K., & Woo, M. (2017). Improving travel decision support satisfaction with smart tourism technologies: A framework of tourist elaboration likelihood and self-efficacy. *Technological Forecasting and Social Change*, 123, 330–341. <https://doi.org/10.1016/j.techfore.2016.10.071>
- Zygiaris, S. (2013). Smart city reference model: Assisting planners to conceptualize the building of smart city innovation ecosystems. *Journal of the Knowledge Economy*, 4, 217–231. <https://doi.org/10.1007/s13132-012-0089-4>

APPENDIX. QUESTIONNAIRE

No.	Respondent's opinions	Questions
1	About the smart attraction dimension	<ul style="list-style-type: none"> – Do you think there are sufficient ‘artificial’ attractions available in your city? Kindly elaborate. – Do you think the heritage attractions in the city are well managed? What else is required? – Do you think that we are well equipped for organizing special events like fairs, festivals etc. in the city and how can we manage them effectively? – In your opinion what are the various ways to manage the attractions of the city through collaboration and participation?
2	About the smart accessibility dimension	<ul style="list-style-type: none"> – What is your opinion about public transport and traffic management in the city? What else is required to improve accessibility in the city? – Internet, websites, mobile applications, social media, QR codes, information services etc. are immensely popular in this era. Do you think there are adequate digital facilities in the city? How can we utilize them to enhance the tourism in the city? – What kind of regulations are required to develop and maintain the accessibility of attractions in the city?

3	About the smart amenities dimension	<ul style="list-style-type: none"> - How do you think the natural amenities and resources of the Himalayan cities differ from other destinations? What should be done for their effective preservation and management? - Do you think there are sufficient built amenities in the city? Do you feel more hotels, restaurants etc. are required? - Which practices and methods should be used to manage both the natural and built amenities in the city?
4	About the smart ancillary dimension	<ul style="list-style-type: none"> - Do you think there are adequate banking facilities in the city? What is required to enhance the available banking services for the benefit of citizens and tourists? - Do you think there are adequate postal services in the city? What is required to enhance them? - Do you think there are sufficient medical services for tourists in the city? In your opinion how can we provide effective and quick medical services to tourists? - Do you think that local communities are well aware and educated to interact with tourists? Which steps can be taken to ensure the same? - In your opinion, are there sufficient platforms for enabling cultural exchange among visitors and locals for mutual enrichment? How can we facilitate effective cultural exchange? - Citizens these days are well equipped to collect, disperse and analyze news and information, especially by means of the internet. Do you think platforms for this journalism are available in the city? How can we engage tourists in citizen journalism? - Digital media have become an integral part of the consumption and production of culture in the past few years. Some examples of e-culture products and services include smart phone apps for museums, AR/VR apps, etc. Do you think e-culture is required to enable a visitor's respectful immersion in local history and traditions? If yes, then please throw light on its applicability in the city. - Do we have effective platforms for getting feedback from tourists in the city? How can we get feedback from tourists effectively through online and offline platforms?
5	About the smart activities dimension	<ul style="list-style-type: none"> - Are we well equipped for organizing gatherings and events on areas like education, religion, health or retreats in the city? What can be done for effective management of such events? - Providing quick access to an activities timetable, travel itinerates or ticket bookings/reservations is the latest and popular trend in tourism destinations? What is your opinion about it? - According to you, how can we effectively manage tourism activities in the city?
6	About the smart packages dimension available	<ul style="list-style-type: none"> - In your opinion are we equipped with the latest technology for effective management of transport services in the city? How can we make the best use of technology in transportation services? - In your opinion do we have sufficient technological platforms for providing information about available accommodation packages to tourists? How can technology assist in enhancing accommodation services? - Technology helps in enhancing overall experience of tourists and it can also assist in the co-creation of tourism packages? How can we utilize the technology for the co-creation of packages in the city? - Do you think the tourism packages which are being offered in the city are well-planned and sufficient? According to you what are the necessary steps required for the effective management of tourism packages and products?