Smart Tourism: A Holistic Approach for Personalized Tourism Services – Trends, Problems, Possibilities and Projections in Indian Context

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Abstract – Internet has become an essential tool for marketing and promotion globally to reach tourists without any intermediaries. The purpose of e-tourism is to create IT embedded infrastructure at destinations on the one hand and to make traveller smart enough to utilize e-techniques on the other hand. Even after having well established electronic and digital infrastructure, some obstacles come along in the path to reach this goal. UNWTO also emphasizes the overwhelming role of electronic business and commerce in the field of tourism promotion with the objective of attracting more tourists towards various destinations worldwide. As per Ministry of Tourism Report 2018, India's rank in foreign tourist arrival is 26th worldwide and is able to attract just 1.17% of total tourist traffic in the world. In the aforesaid context, this paper tries to identify issues in relation to FTA in India and how e-marketing strategies along with smart destinations can be utilized play a vital role to uplift India's rank and share in tourism at global level. In addition, this paper attempts to project the future state of smart tourism in India. In order to draw conclusion and offer suggestions & recommendations, researchers employed questionnaire and analyzed secondary data. Secondly, hypothesis testing along with trend analysis was also carried out. In the light of the above statements, results prove e-tourism as a significant and effective tool to promote India tourism and uplift its position at international level.

Keywords: Smart Tourism, IT Infrastructure, FTA, E-Marketing

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INTRODUCTION AND REVIEW OF LITERATURE:

The introduction of internet at the end of the 20th century paved the way for e-revolution in every industry, particularly in tourism, all over the world. The period from 2000 to 2015 saw a tremendous growth in the world tourism statistics. Smart Tourism is emerging and developing fast in the industry along with Information and Communication Technology (ICT). It has altogether changed the model and structure of marketing within two decades. This has legitimately allowed sufficient room for every stakeholders of the tourism business, particularly tourists. Thus supply is overridden by demand, as co-creation and experience of the tourists play largely their role on the internet. However, *Mitsche*

& Strielkowski (2016) had given a hint that demand side of the tourist has not been explored in the perspective of e-tourism services. Et.al, refers to *Rasinger (2009)* stating that mobile tourism has totally replaced and transformed the information search particularly after 2007, even though the result of their work specifically pointed out the increasing uses of smartphones, irrespective of the age group, for tourism related services.

No doubt, destinations also should be as smart as Internet of Things (IoT) in attracting tourists. *Maitra (2017)* signifies the importance of development of smart cities to promote tourism smartly. While discussing the factors such as electricity, water and sewage system, Internet of Things (IoT), Information and Communication

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Technology (ICT), e-governance, mobility and public transport, and solid waste management education and health etc. for developing smart cities, the author asserts that e-tourism alongside is getting promoted. The combination of the concept of smart city and smart tourism would promote not only domestic tourism but also international tourism. *Amarawat, Imran, Kumar & Qureshi (2017)* attempted by suggesting means and ways using smart phone apps to promote foreign tourist arrival. Their suggestion included e-verification and e-registration process, cashless deal on arrival, use of GPS for locating tourist spots, vehicle supporting system and development of emergency help application etc. that would facilitate and ease the formalities of the tourists visiting India. *Buhalis and Sinarta (2019)* refer to *Minghetti and Buhalis (2010)* stating that developed countries take advantage of ICT and social media earlier than developing countries. Such advantage leads to personalised e-service *(Buhalis and Foerste, 2015).* They conceptually and critically analysed the smart approaches, advantages and benefits of smart tourism destinations, its advantages and benefits. *Kumar (2016)* has applied SAP-LAP analysis for selection of smart destinations and application of smart tools in such destinations. Author had concluded in his paper that development of smart destinations would prove to be a stable competitive marketing strategy for its co-players in the world. *Gretzel et.al (2015)* is of the view that smart tourism consists of three components such as smart experience, smart business ecosystem and smart destination, along with the functions like creation, process and exchange of information. Smart business ecosystem should integrate various stakeholders digitally so as to serve better to the tourists. *Kaur and Kaur (2016)* describes the various ideas lying behind smart tourism. Such ideas includes use of smartphones, cameras, sensors, big data for analyse, collaboration of web and mobile services, use of cloud services and IoT, touch screen for interaction and mobile tours and apps. *Vasavada & Padhiyar (2016)* attempted to find out difference between smart tourism and e-tourism. *Ibid* listed down the various aspects of smart tourism wherein research can be undertaken. Such aspects include service provision, consumption and facilitation. *Kalbaska, Janowski, Estevez and Cantoni (2017)* have critically analyzed the role Government with the rest of stakeholders (Government, Business, Non-profit organizations, Visitors, Employees and Citizens) in the perspective of smart tourism, and gazed into the theoretical analysis in six broader categories such as G2G, G2B, G2N, G2V, G2E, and G2C. Suggestions are made that if the interaction among the stakeholders is digitally employed well, economic, financial, cultural and technological resources can be easily pooled up and utilized effectively so as to formulate policies and programs in digital era. On the other hand, gaining trustworthiness of the customers over internet particularly during online financial transactions is a crucial task for every business. This is further supported by *Khare & Khare (2010).*

They are of the view that trust and security, services offered coupled with proper and sufficient information on websites would further attract tourists. The use of smartphones has gradually replaced the role of guides. Hence, *Lee (2016)* is of the opinion that the smart applications should be audio enabled so that apps can play various roles of a guide simultaneously such as service provider, educator, facilitator, and representative.

Keeping the preceding paragraphs as base, when we look into smart tourism in Indian context, this is pathetic that India is still lacking behind in developing and utilizing technology for promoting tourism at international level. Internet and its application have brought India's rank of International Tourism in the world from 50th place to 26th place (India Tourism Statistics at a glance, 2018). A glance on the following table also proves that India is striving hard to get a stable position in terms International Tourist Arrival (ITA).

Rank	2000	2005	2010	2015	2017
1.	France (75.6)	France (76.0)	France (76.8)	France (84.5)	France (86.9)
2	USA (50.1)	Spain (55.6)	USA (59.7)	USA (75.6)	Spain (81.8)
3	Spain(47.9)	USA (49.4)	China (55.7)	Spain (75.6)	USA (76.9)
4	Italy (41.1)	China (46.8)	Spain (52.7)	China (59.3)	China (60.7)
5	China (31.2)	Italy (36.5)	Italy (43.6)	Italy (52.4)	Italy (58.3)
6	UK (25.2)	UK (29.9)	UK (28.1)	UK (35.8)	Mexico (39.3)
7	Russian Federation (21.1)	Mexico (21.9)	Turkey (27.0)	Germany (35.6)	UK (37.7)
8	Mexico (20.6)	Germany (21.5)	Germany (26.9)	Mexico (35.0)	Turkey (37.6)
9	Canada (19.6)	Turkey (20.3)	Malaysia (24.6)	Thailand (32.6)	Germany (37.5)
10	Germany (18.9)	Austria (19.9)	Mexico (22.4)	Turkey (30.9)	Thailand (35.4)
	India (2.65) (50th rank	India (3.92) (43rd position)	India (5.78) 42nd rank	India (13.28) 24th rank	India (15.54) 26th rank

Source: India Tourism Statistics at a glance, Ministry of Tourism, Government of India

Consequently this paper tries to identify trend, problems and prospects in making available and utilizing smart tourism as a tool, to promote ITA and FTA.

OBJECTIVES

The following objectives were set for study:

(1)   To appraise the vast potential of India in terms of available tourism resources

(2)   To identify the issues in relation to FTA in India

(3)   To analyse role of smart tourism and e-marketing strategies in destination promotion at global level

(4)   To make projections about future state of e-tourism in India

(5)   To suggest and recommend ways and means for escalating India's share and position in terms of FTA.

RESEARCH METHODOLOGY:

Based on the objectives, both primary and secondary data collection was made. Primary data collection, for the purpose of identifying trends and

G. Srinivaasan[1]* Ketan Bhatt[2] Sunil Kumar Kabia[3]

availability of e-tourism services, was employed with travel agents. The same was employed with tourists at convenient tourist places for the purpose of identifying usability of e-tourism services. Random sampling method was applied everywhere so that generalization of the results could be easier. Convenient data analysis tool is applied throughout the work.

Selection of destinations and samples: Telephonic Interview was conducted with 40 travel agents of New Delhi preparing and conducting tour packages to two different circuits namely Bundelkhand Circuit and Golden Triangle of South India. The objective behind considering these two circuits is to analyse whether there exists any significant difference in the level of comforts while preparing and conducting tour packages at an emerging circuit with low level of ICT and a well established circuit with high level of technology embedded environment. The outcome of the data analysis will reveal the expected benefits that may be realised in future by India tourism with increasing level of ICT.

In order to analyse the existing trend in availability and usability of e-tourism services for foreign tourists and to forecast the future in the area of smart tourism, this was decided to collect data randomly from 500 foreign tourists each from Khajuraho, Orchha, and Gwalior. Data was collected from October 2018 to March 2019. The following table would further provide insight into data collection. Some of the samples became invalid as the questionnaire was fully filled up. Tourists were asked to express their agreement with statements relating to availability of tourism services provided by suppliers of India.

Sl. No.	Name of the tourist place where data collected	Number of samples proposed	Number of samples collected	Number of samples invalid	Number of samples valid for research purpose
1.	Khajuraho	500	467	102	365
2.	Orchha	500	308	76	232
3.	Gwalior	500	363	88	275
	TOTAL	1500	1138	266	872

FINDINGS & DISCUSSIONS

To achieve the above stated objectives, the entire analysis had been divided into following four sections.

1. Appraisal of India tourism potentialities

2. Reasons behind low performance of India in attracting international tourists.

3. Smart Tourism as a possible tool to increase FTA in India

4. Projections regarding future status of Smart Tourism in India

TOURISM POTENTIALITIES IN INDIA

India is a country with large number of destinations having variety of tourist attractions and facilities. India tourism is embedded with incredible culture, glorious history, world famous monuments and heritage sites, alluring natural beauty, excellent infrastructure & superstructure, variety of cuisines and many more classic facilities for tourism development. With 29 states and 7 union territories, each the size of a small country is unique in terms of culture, landscape, climatic & weather conditions, environment & ecology, history & heritage, natural & man-made attractions, art & architecture, infrastructure and other exemplary services of tourists' interest which reveals the potentiality of India's tourism industry. In terms of tourist resources India is nowhere less than developed nations of Europe and Americas. In spite of such facilities, India is able to attract just 10.04 million tourists in 2017 (says MOT report-2018). It has much untapped potential, especially when we compare it with city like Barcelona in Spain welcoming around 30 million tourists every year or a country like France attracting more than 80 million foreign tourists annually. Although, India has improved its rank in terms of foreign tourist arrival at international level but still there is much more to improve. Considering these peculiarities of Indian tourism industry, it is high time to realize India's potential as Tourism hotspot.

Reasons behind low performance of India in attracting International Tourists

Irrespective of the vast natural, cultural and manmade tourist resources spread all over India, she is unable to get a good position and stand in the top 10 countries in terms of FTA. Such a low performance is resulted out of the various conditions and circumstances of political, social and cultural, economical and technological in nature. Terrorists attack all over the country from time to time ever raises a question on the safety and security of not only the local residents but also domestic and international tourists. Looting, misguiding and misbehaviour of the host for self purpose would obviously project a wrong image of the country. Clean India and Green India campaign developed with the objective of re-emerging the nation as an eco and tourist friendly destination fails to inculcate knowledge on the purpose and significance of the project among the nationals of the country to be a responsible host, and among the tourists to keep the destination sustainable. This, in combination with air and noise pollution prevailing in the country, eventually and gradually, affects badly hygiene and sanitation, standard, quality and healthy life style and, thus, the feel of hospitality in the minds of the international tourists. Economically, the per capita income of the nationals is so poor that they are unable to keep up a standard life and to showcase

G. Srinivaasan[1]* Ketan Bhatt[2] Sunil Kumar Kabia[3]

a quality life style. On the other hand, the role of intermediaries is not minimized (and, of course, cannot be ruled out as long as they would play their part honestly) so as to attract more inbound tourists. The era of internet has made the world "a global village". However, a lack of good infrastructure of cloud computing systems, internet and insufficient knowledge of the tourists to be "smart" enough on internet, still, calls for the intermediaries for the purpose of information delivery, booking, reservation, registration, cancellation, transfers, facilities, completion of formalities and procedure in India. This is ironical that while India provides e-visa and visa on arrival, it compels its tourists to physically visit nearest FRRO office for registration and extension of duration of stay. Non-availability of strong mobile networks keeps the tourists virtually away from their home. Community involvement for promoting and developing tourism in India seems to be poor.

As of now benefits arising out of tourism development in India are shared among a few restricted sections of society. Hence, there exists an urgent need to promote a globally famous smart tourism in India which must include all the sections of the society especially an unprivileged one in the tourism development process.

At present India tourism is limited to a few forms of tourism like scientific, cultural, historical, archaeological and natural & other sites. Hence there is a need for diversification.

Smart Tourism as a possible tool to increase FTA in India

- Government needs to implement e-marketing strategies in their existing and future plans and policies for tourism promotion.

- India should take advantage of nearly 6,00,000 villages having their distinctive culture and heritage to create extensively unique and a new kind of experience. These villages should be made digital to attract more tourists.

- Integrating Incredible India Campaign into a more holistic campaign that makes use of digital services along with existing print culture of promotion.

- Making destination smart with involvement of technology will provide tourist with a sense of more comfort and security. Use of smart applications for booking, shopping, having guides, after getting complete information about them, makes destination more safe and comfortable to the tourists.

- Involvement in digital infrastructure along with physical infrastructure is the need of the hour to make the concept of "digital India" successful in the field of tourism.

- Providing training to unskilled, semi-skilled and outdated labour force in the area of e-technology under the existing schemes like PMKVY, NREGA, self employment schemes etc. will create a technically smart labour force for tourism industry. In this way, India makes use of its demographic dividend (existence of large number of people in working age group). Such dividend would be beneficial only when we are able to create enough employment opportunities for its youth. Amalgamation of smart tourism promotion along with training youths to offer them technical hand will improve the employment infrastructure of our nation.

- Existing and new schemes of Ministry of Tourism, such as, Prasad Scheme and Swadesh Darshan may be alongside digitalized to increase use and accessibility.

In order to know the possibility of promoting smart tourism in India, a survey was conducted with the objective of finding out the level of comfort experienced by travel companies while preparing packages and conducting tours at two different destinations. The destinations selected were Bundelkhand Circuit and Golden Triangle of South India. The travel companies in New Delhi were randomly selected for the purpose in question. The reason for selecting Bundelkhand circuit is that it is an emerging circuit with low level of e-tourism services in terms of availability of and usability. In contrast, the researchers have identified golden triangle of South India, as it is popular amongst foreign and domestic tourists along with availability and usability of e-tourism services at high level. The results drawn after analysis would declare whether or not there exists any significant difference in preparing packages and conducting tours with more involvement of e-tourism facilities.

Hypothesis for the Survey for e-tourism services in preparing packages:

H_0 = There does not exist any difference in the level of comfort while preparing packages for golden triangle circuit of South India and Bundelkhand circuit.

H_A = The level of comfort is more while preparing packages for Golden Triangle for South India than Bundelkhand Circuit.

G. Srinivaasan[1]* Ketan Bhatt[2] Sunil Kumar Kabia[3]

Hypothesis for the Survey for e-tourism services in conducting tours:

H_0 = There does not exist any difference in the level of comfort while conducting tour for golden triangle circuit of South India and Bundelkhand circuit.

H_A = The level of comfort is more while conducting packages for Golden Triangle for South India than Bundelkhand Circuit.

A telephonic survey was conducted with 40 travel agents of New Delhi who are preparing and conducting tours at Golden Triangle of South India (Kanchipuram, Mahabalipuram and Chennai) and Bundelkhand Circuit (Bithoor, Chitrakoot, Jhansi, Kalinjar and Mahoba). Out of these 40 travel agents, 23 responded for question number one and 21 responded for question number two. The questions asked were:

Q.No.1: "Kindly rank your level of comfort in terms of availability and usability of e-tourism facilities and services in preparing packages for Golden Triangle of South India and for Bundelkhand Circuit in the scale of 0 to 10 wherein 0 is least comfort and 10 is highest comfort".

Q.No.2: "Kindly rank your level of comfort in terms of availability and usability of e-tourism facilities and services in conducting tours for Golden Triangle of South India and for Bundelkhand Circuit in the scale of 0 to 10 wherein 0 is least comfort and 10 is highest comfort".

Data analysis for Q.No.1 for Telephonic survey: (E-tourism facilities and services for preparing packages)

S. No.	Rank given for Golden Triangle of South India	Rank given for Bundelkhand circuit	Difference
TA 1	8.2	4.6	3.6
TA 2	7.4	3.8	3.6
TA 3	6.9	3.7	3.2
TA 4	7.0	4.1	2.9
TA 5	6.4	4.7	1.7
TA 6	8.5	4.3	4.2
TA 7	5.7	3.7	2
TA 8	9.1	3.1	6
TA 9	8.2	4.8	3.4
TA 10	5.7	2.3	3.4
TA 11	7.3	5.2	2.1
TA 12	9.3	4.6	4.7
TA 13	5.9	5.1	0.8
TA 14	8.0	4.9	3.1
TA 15	6.8	4.5	2.3
TA 16	6.3	7.2	-0.9
TA 17	8.7	6.5	2.2
TA 18	4.9	5.2	-0.3
TA 19	7.1	6.0	1.1
TA 20	6.3	4.9	1.4
TA 21	7.1	4.2	2.9
TA 22	7.9	6.9	1
TA 23	5.7	4.9	0.8
TOTAL	164.4	109.2	55.2

Data analysis for Q.No.2 for Telephonic survey: (E-tourism facilities and services for conducting tours)

S. No.	Rank given for Golden Triangle of South India	Rank given for Bundelkhand circuit	Difference
TA 1.	7.3	2.8	4.5
TA 2.	6.9	7.1	-0.2
TA 3.	8.8	3.6	5.2
TA 4.	8.0	4.0	4
TA 5.	8.9	4.0	4.9
TA 6.	7.9	3.3	4.6
TA 7.	6.9	4.1	2.8
TA 8.	7.0	7.0	0
TA 9.	3.8	5.3	-1.5
TA 10.	6.9	4.2	2.7
TA 11.	5.4	4.1	1.3
TA 12.	7.2	4.9	2.3
TA 13.	5.0	5.0	0
TA 14.	8.3	2.9	5.4
TA 15.	5.9	3.9	2
TA 16.	6.0	2.7	3.3
TA 17.	8.4	3.1	5.3
TA 18.	7.9	3.6	4.3
TA 19.	8.9	4.1	4.8
TA 20.	6.0	6.0	0
TA 21.	7.8	4.1	3.7
TOTAL	149.2	89.8	59.4

T-test for difference calculated from responses for Q.No.1:

To test One-Tailed Hypothesis in this regard, the difference in ranks calculated in Q.No.1 was utilized. Since the sample size is small i.e., 23 which is less than 30, and population standard deviation is also unknown. So One-Tail T Test at 0.01 level of significance is performed.

Different Scores calculated as per formula

Q. No.	Sample Size (n)	Sample Mean ($\bar{x}$)	Population Mean (μ)	Sample Standard Deviation (s)	Degree of Freedom (v)	Critical Value at $\alpha=0.01$ (t_α)	Calculated t-value using $t = [\ (\bar{x} - \mu)\ *\sqrt{n}\ ] \div s$
1	23	2.40	0	1.61	22	2.508	7.15
2	21	2.83	0	2.15	20	2.508	6.03

Since the calculated value of t is more than critical value at 1% level of significance, it infers the calculated t lies in the rejection region. Therefore, it may be concluded that the comfort level experienced by travel agents while preparing and conducting tours at golden triangle of south India is significantly more than that of bundelkhand circuit.

Further analysis on the results drawn from this test provides us with a view that the travel agents and tour operators find it more convenient to preparing and conducting tours at the destinations embedded with sophisticated technological environment and are therefore interested in promoting smart destinations. The selected places in the survey offer insight that as destinations will become "smart" with urbanization and industrial upgradation, the comfort level for travel agents and independency & security of tourists will also increase. It will strengthen and support smart tourism, which will bring robust growth in India's

G. Srinivaasan[1]* Ketan Bhatt[2] Sunil Kumar Kabia[3]

travel trade sector. It will attract more and more tourist from each corner of the world to experience India's large number of diversified tourist destinations.

PROJECTIONS REGARDING FUTURE STATUS OF SMART TOURISM IN INDIA

With the upcoming of smart cities having high technology intense environment, the smart tourism will get boosted in India. This is because that direct and positive relationship between smart city and smart tourism. In the era of globalization each destination is facing tough competition internationally due to continued technological advancements. In such a situation, if a nation plans to survive successfully in international market, it will have to upgrade its existing technological infrastructure as per the demand of smart tourist. It indicates a linkage between smart tourism and a long term sustainability of a destination. As it is evident from empirical data that the destinations which are performing extremely well in global market are those who successfully took advantage of technological know-how in the field of travel trade. Therefore sustainability may be achieved only when a country is able to make its tourism industry smart in accordance with demand of the hour.

Availability of E-tourism services:

Sl. No.	STATEMENTS	Disagree	Indifferent	Agree
		Data in percentage (rounded off to nearest integer value)		
1.	Websites and smart phone applications of the TATO of India are easily accessible in our country.	54	20	26
2.	Websites and smartphone applications of TATO of India are downloadable in our country	48	23	29
3.	Information available on websites and smartphones apps of TATO is easily understandable.	45	23	32
4.	I am available with more and more web sources year after another to collect information on destinations of India.	34	21	45
5.	Online I am getting offers on websites and smartphones apps of TATO.	32	23	45
6.	I am available with more web sources to select my package on destinations of India.	34	25	41
7a.	I have more and more e-services available at ground level for hotel booking services.	25	18	57
7b.	I have more and more e-services available at ground level for cab booking services.	59	19	22
7c.	I have more and more e-services available at ground level for guide booking services.	63	18	19
7d.	I have more and more e-services available at ground level for attraction ticket booking services.	59	21	20
8.	I directly do my booking in the websites of TATO of India or using apps in smartphones.	37	26	37
9.	I can easily complete formalities of registration of my arrival in India using apps and weblinks.	19	17	64
10.	I have more availability of e-services to remove linguistic barriers.	45	18	37
11.	I am in touch with my kith and kin during my stay in India using smartphones.	42	19	39
12.	I can find the locations of the tourist places using smart apps.	29	19	52
13.	I am able to find services in smartphone to locate my position on map for indicating police in emergency at destinations.	34	22	44
14.	I have more availability of e services for interacting with localities through homestays, bike rider, guides etc.	51	21	28
15.	TATO of India ask me to give feedback online.	24	23	53

It is evident from the above table that the availability of various e-tourism facilities is increasing with time. It means the respective service providers and government are duly concerned about creating a technology embedded environment in India to facilitate independent movement of tourist in each and every stage of tour.

Usability of E-tourism Services:

Out of 872 samples mentioned above, 146 respondents did not answer as to since they have started using various e-tourism services in India. So, 726 samples were found valid for this part of the research.

Sl. No.	E-Services	Use of Services in the years				
		Before 2000	2000 to 2005	2006 to 2010	2011 to 2015	2016 to 2018
		(in percentage, rounded off to the nearest integer)				
1.	Information Search	7	13	35	72	90
2.	Destination Choice	3	9	42	74	94
3.	Offers and Discounts	1	6	47	78	97
4.	Travel Insurance	0	0	36	82	92
5.	Train Booking	0	0	39	87	94
6.	Flight Booking	6	17	49	92	94
7.	Extra Baggage	0	0	7	69	84
8.	Train and Flight Status	0	5	57	88	96
9.	Hotel Booking	3	11	68	90	96
10.	Cab Booking	0	0	32	69	83
11.	Hotel Check in	0	0	43	83	96
12.	Airline web check in	0	0	44	91	96
13.	Navigation (GPS)	0	0	36	82	94
14.	Attraction Ticket Booking	0	0	23	57	68
15.	Banking and Foreign Exchange	0	0	57	78	92
16.	Visa Facilities	0	0	48	84	94
17.	Voice Search	0	0	0	56	74
18	Food order during train journey	0	0	0	29	48
19	uploading photographs in social media and apps while in destination	0	0	21	67	86
20	Feedback	0	0	19	58	79

As indicated in the table, the usability of e-services is increasing year after another. This means that travellers are taking more interested in using upcoming services to enhance the quality and comfort of travel experience during, before and after the tour.

The analysis of Table 1 and Table 2 leads us to the conclusion that on one side availability of smart services is increasing with time and on the other side the usability also is increasing year by year. This reflects that the initiatives undertaken by service providers and government are appreciated by travellers. This is because they offer a platform to travellers to make decisions with more comfort and ease than ever before. The trend analysed includes tourists of different age groups who are interested to book and manage their tours themselves instead of hiring an agent to fulfil their requirements. Therefore on the basis of past trends visualized in terms of availability and usability of various e-tourism services, one can infer that India is on a track to transform itself into a smart destination. In future, there would be addition in existing set of e-tourism facilities that would create a platform for domestic as well as foreign travellers to become completely technology-bound-independent in each and every stage of tour. To reach at optimality, concerned suppliers and authorities would have to consider negative aspects of technology that may create hurdles in the growth and development of smart tourism.

G. Srinivaasan[1]* Ketan Bhatt[2] Sunil Kumar Kabia[3]

RECOMMENDATIONS AND CONCLUSION:

Keeping update and implementing new technology is an ever challenging task. However, to be successful and to sustain in the industry, such a challenging task should be planned and carried out carefully. With a rapid rise in availability and usability of e-tourism services amongst smart tourists, it may be predicted that smart tourism will bring a robust growth in tourism sector of developing nations like India. To become at par with the leading countries in terms of FTA, countries like India should not delay to equip with new technologies and should seek and adopt new strategies. Based on the observations and data analysis, some recommendations are given below:

1. Websites must be able to be loadable in different browsers and, apps must also support different smartphone operating systems.

2. A proper promotion of smart tourism will increase the number of FTAs as well as their average length of stay.

3. It has been witnessed in the past that even after the increase in number of FTA, there has been no change in foreign exchange earnings which depicts the lack of avenues for tourists to spend their money. Implementation of ICT in all the phases of travel would provide opportunity to tourists to spend their money in various products and services in and around destinations.

4. Revamp of organizational structure at national level is required in such a way that campaign would motivate officials and tourists to use websites and smart phone applications developed for this purpose.

5. The construction and maintenance of a single website owned by the government having authentic information on state wise and further district wise tourism resources organized systematically is the need of the hour.

6. The website / app should provide information on, not only tourism resources, but also, government and private owned shops, restaurants, hotels, taxi, tourist guides, police stations, contact details of tourism officials, ATM centres etc.

7. Depending upon the needs and wants of the tourists, various types of convenient transport vehicles such as, bicycles, bikes, and cars should be made available, on rental basis, to reach destinations. That should be supported with authenticated mobile apps using which the tourists could be able to know the availability of vehicles.

8. A toll free helpline number should be made available at various spots so that tourists may get themselves connected with authorities while in emergency or if they happen to be offline.

9. Construction and maintenance of all weather roads, development of apps for directing the tourists to the destinations from the current location, for increasing tourist independent mobility with community involvement in rural areas is necessary to improve accessibility for tourists.

10. Provision of International Driving licence along with a free SIM card on demand for limited time to foreign tourists may be made available to improve agile tourism and to communicate anybody within and outside destination.

11. Availability of smartphone charging kiosks at various tourist spots and restaurants along with free wi-fi facility may be a step towards building the destination friendly for smart tourists.

12. Electronic registration of the foreign tourists should be encouraged to save time of the tourists and rationalize existing formalities, provided the detailed itinerary of the tourists must be made available in advance.

13. International Tourists should be able to do booking online their train tickets, bus tickets and should be able to do payment in advance. This could be possible if payment gateway providers would have a centralised database of all leading banks across globe.

14. Guidelines on hygiene and sanitation, clean and maintenance of the tourist spots should be published and made available online for locals as well as tourists as a part of awareness campaign.

15. Literature published by various travel companies and concerned authorities should be available at their websites and applications in different languages at for convenience of foreign tourists.

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