

Path Analysis to Explore the Relationship in Between Tourist Satisfaction and Development of E-Tourism: Case Study of a Class I Town in West Bengal, India

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Abstract *Development of e-tourism mainly depends on the tourist satisfaction at destination and integration of Information and Communication Technology (ICT) in recent times. Co-evolution of socio-cultural development together with the growth of tourism industry has been a regular phenomenon. The present study opts to explore the correlation among factors associated with e-tourism such as Quality of Travel Satisfaction (QTS), Satisfaction with Travel Websites (STW), Satisfaction with Quality of Information (SQI) and Psychological Status of Tourists (PST) and their associated observed variables through Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The present study surveyed fourteen hotels equipped with ICT and 400 tourists selected randomly through a structured questionnaire in Purulia municipality town. It has been found that adoption of ICT in tourism persuaded tourists to explore the natural beauty and cultural heritage of Purulia repeatedly. The SEM model revealed that all the 17 observed variables studied under the 4 latent variables associated with e-tourism were strongly correlated with tourist satisfaction. The present study, therefore, intends to draw the attention of government tourism planners and private tour managers to consider the tourist destination satisfaction factors linked with e-tourism for steady growth in regional tourism and sustainable socio-economic development.*

Keywords: *E-Tourism, Information and Communication Technology (ICT), Tourists' Satisfaction, Sustainability, Socio-Economic Development*

INTRODUCTION

Tourism industry has developed rapidly in recent decades all over the world and contributing considerably to the total GDP of any country. In recent years, evolution of Information and Communication Technologies (ICTs) and its adoption in tourism domain have brought about paradigm shift in the growth of Tourism industries (Atembe, 2015) overcoming the bottleneck of classical model of traditional tourism. The adoption of ICT technology in tourism following construction of user-friendly mobile apps and well guided logical steps have proved to be of great success of the ICTs that invariably increased the user

numbers and experience (Compuware, 2012). The global growth of Tourism empowered it to function as vital economic backbone and has restructured socio-spatial relations including related development and planning. Moreover, Tourism plays a significant role in shaping and influencing global-local relations and power-issues owing to its political relevance and influential activities (Christian, 2016; Milne & Ateljevic, 2001). Therefore, global tourism industry is not only an economic consensus but also a social and political process of change reflected in the recent modes of neo-liberal governance (Bramwell, 2001; Hall, 2011). However, the priority has emphasized on the role of markets rather than the state (Peak & Tickell, 2002). In amalgamation

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of all these factors, an advanced thinking for the development and planning in tourism (Saarinen et al., 2017) have evolved. The blessings of ICT and wearable devices make modern tourism “Smart” and with the help of the smart tourism technologies, tourism suppliers have begun to streamline their current business models and strategies (Atembe, 2015). On the other hand, these technologies help tourists to perform mobile social web activities and to create a new way of life (Fesenmaier, Klein & Buhalis, 2000; Ye & Tussyadiah, 2011; Lee & Mills, 2010; Luz, Anacleto & Almeida, 2010; Khare & Khare, 2010; Tussyadiah & Fesenmaier, 2008; Wang, Park & Fesenmaier, 2012). Popularization of mobile technology and relevant tourism apps modulated tourists’ experiences and behavior to the destination (Cortland, 2013; Mihajlovic, 2014; Neuhofer, Buhalis & Ladkin, 2015).

Tourist satisfaction and travel experience have been given prime importance in e-tourism. However, factors like functional benefits, complexity, perceived risks and costs are decisive factors for determining the level of satisfaction among tourists. Previous studies by Lam et al. (2013) have pointed out that internet use is highly correlated with the tourists’ acceptance and decision making when they made schedule for their vacations and determine their revisit intention to a spot in Malaysia.

An android based application Banyumas Travel Guide (BMSGuide) and use of Google map have unearthed many unknown places in Banyumas regency in east Java Province to the tourists and made tourism a familiar one (Gunawan, 2017) in these areas. Smart tourism technology attributed a positive impact on smart tourism satisfaction in different tourism cities. Despite the prevailing differences in destination services and service satisfaction observed in Seoul, Busan and Jelu in South Korea, the effect of smart tourism has turned out to be very effective in these cities (Um & Chung, 2019). Previous literatures and survey-based analysis also have revealed that life satisfaction and revisit intention invariably relied on travel satisfaction and satisfaction with tourism services in pre- trip, en-route, destination site and return trip (Lončarić et al., 2019).

Small and Medium Tourism Enterprises (SMTEs) in developing countries like Nepal has efficiently taken part in e-tourism with global online platforms like Trip Advisor, Booking.com etc. and have been able to identify the key barriers and motivators of e-tourism (Lama et.al, 2020). The example of Nepal may serve as a prototype for many developing countries and certainly adoption of this model may serve to improve the economic and social structure. Recently, the use of letterboxing and internal rewards also has started to attract tourists in many places keeping in mind the psychological relaxation of the tourists (Kim et al., 2021). It has been seen that with the outbreak of COVID-19, platform mediated tourism services have flourished by not only

professional providers but Governmental tourism providers also. The main cause for this initiation has vested in local level improvement of rented neighborhood and development of quality of life of the residents, work participation, housing market which may be possible through the use of global technology (Minoia, 2021).

In India, several studies have revealed that, modern travelers are interested in interactive facilities, high quality travel services, varied information on products and appropriate assistance information in decision making (Khare & Khare, 2010) but at the same time they are hesitant on the safety and security in financial transaction. According to the World Travel and Tourism Committee (WTTC) Report, the total contribution of travel and tourism to India’s GDP was 15,239.6 billion which was nearly 9.4 percent of GDP in 2017 (WTTC Report, 2019) and the GDP share is likely reach 9.9 percent by the year 2028. In recent times the use of technology has evolved in the rural tourism as well and actively contributing to solve existing socio-economic challenges in society (Kumar & Shekhar, 2020). However, a lot of uncertainties are arising regarding the impact of technology implementation in financial growth in e-tourism. It is also questionable that how rural and small urban towns with limited infrastructure and technical knowledge may move forward with e-tourism. The answer is partly hidden in the competition among destinations and creating a brand image in rural e-tourism domain as modeled Manhas et al., (2016) although number of factors which act predominantly in pre-travel, during travel and post travel situation that connects the tourists’ satisfaction with social, cultural, economic, political and psychological status and decisive in revisit intention of the same place.

Structural Equation Modeling (SEM) in Tourism has emerged and enhanced in recent times as the data variability and conceptual modeling for unknown destinations may help researchers to develop insight solutions for those destinations (Nunkoo et al., 2013). The feedback and level of tourists’ satisfaction also may help tourism websites and ICTs to enrich their view about destination. Different literatures have focused on tourist destination online content (TDOC) and electronic word of mouth (e-WOM) and their effect on tourist behavior validated through SEM (Majeed et al., 2020). Influence on tourist satisfaction with destination attributes tested and validated by SEM (Campdesuñer et al., 2017) in different times. Hence, SEM has that ability to bring theoretical knowledge to practical application with defining all of positive and negative externalities related to tourist satisfaction and e-tourism or cyber-tourism (Anwar & Hamilton, 2005).

In the present study, four pertinent psychological variables i.e., Satisfaction with the Use of Internet (SUI), Satisfaction with Travel Experience (STE), Satisfaction with Safety and

Security (SSS) and Satisfaction with Revisit Intension (SRI) have been taken with some selected attributes to assess tourist's destination satisfaction in Purulia Municipality town, the only class I town in Purulia District of West Bengal. Purulia is the land of natural beauty and unique in cultural heritage unexplored Purulia has been explored exclusively in recent times through the blessings of e-tourism. There are hotels linked with e-tourism in Purulia Municipality town and the influx of tourists in recent times in Purulia has become increasingly impressive. The correlation between amplitude of tourists' satisfaction with the multidimensional factors in the destination site have ignited to conceptualize a structure equation model that might serve as prototype for better understanding, planning and recommendation in tourism sphere in similar tourist center. Therefore, SEM has been taken as a research instrument to monitor development in socio-economic and spatial-temporal aspect. The main objective of this work is to analyze the correlation among the variables linked with tourists' satisfaction in destination through measurement model and to assess the future implication of tourism in Purulia Municipality town.

LITERATURE REVIEW

It has been established from the previous literatures that travel satisfaction has had given prime importance in tourism business and industries (Lam et al., 2013; Lončarić et al., 2019). According to Anwar and Hamilton (2005), among all factors like human, geopolitical, economic, technological and environmental, the technological improvement may bring a cyber-revolution in tourism industry. Scholars like Lam et al. (2013) had furnished the impact of internet on tourist satisfaction in terms of 'Functional Benefits', 'Complexibility', 'Perceived Risk' and 'Costs' among which perceived risk may not always significantly influence tourist satisfaction. In the progress of time, it has become evident that 'smart technologies' always boost up the tourism market whether in the form of wearable devices as found in the studies of Atembe (2015) or in the form of mobile technology like G-Map, GPS as analysed in the studies of Gunawan (2017). It has also found in the studies of Wang et al. (2016) that based upon perceived benefits of internet, travel planning behavior also may affected and the use of internet may resulted in increase in tourist-flow, increasing number of tourist places or destinations and also the information sources that makes tourism more convenient. It has analysed in the latter studies that smart tourism includes technology enhanced experience and smart destination (Femenia-Serra et al., 2018) which may foster the booming of Information and Communication Technology (ICT) and expanded towards smart tourism experiences. Moreover,

tourist experience and travel satisfaction may be the most important and integral part in tourism services which may intended tourists to revisit the same destination (Lončarić et al., 2019). Informativeness, interactivity and personalization however may be the key factors according to Jeong and Shin (2019), which affect tourist satisfaction, experience and revisit intentions. Um and Chang (2019) also had analysed the overall satisfaction based upon smart tourism satisfaction and service satisfaction and revealed that smart tourism technology attributes positively influence smart tourism satisfaction. It has found in the study of Marino and Pariso (2021) that the application of ICT may foster e-tourism in local tourist district and cause the main reason for tourist satisfaction as well as economic benefit of the locality too.

In the developing countries like Nepal the blessings of ICT has impacted on e-tourism adaptation in small and medium tourism enterprises are affected by environmental factors related to different attributes as found in the literatures of Lama et al. (2020). It has clearly depicted in the study of Sadar et al. (2021) that ICT plays a pivotal role in real life of the tourism and hospitality industry, where many factors like organizational, technical, economic, environmental and personal may belongs to the key factors in case of Bangladesh.

In India, earlier studies of Sinha (2014) had emphasized on the use of internet and ICT in tourism to reduce uncertainty and risks and to enhance the quality of travel and customer satisfaction. In recent studies of Prince and Joseph (2018) had established that if ICT can be introduced in tourism properly the benefits will be merging with the Indian economy as tourism industry has the ability to prosper country's economic condition.

MATERIAL AND METHODS

Study Site

Purulia municipality is situated in Purulia district, which is the western most district of West Bengal, India. This municipality extends between 23°18'30"N to 23°21'15"N latitude and 86°20'30"E to 86°23'15" E longitude with 12 square kilometer in areal extension (Fig. 1).

Purulia district is sparsely populated than the other districts of West Bengal. Purulia municipality area has a population of about 1.2 lakh which is the most populous municipality and the only class I town among three municipalities located in Purulia district. All the district administrative activities are operated from the headquarters situated in Purulia Municipality area.

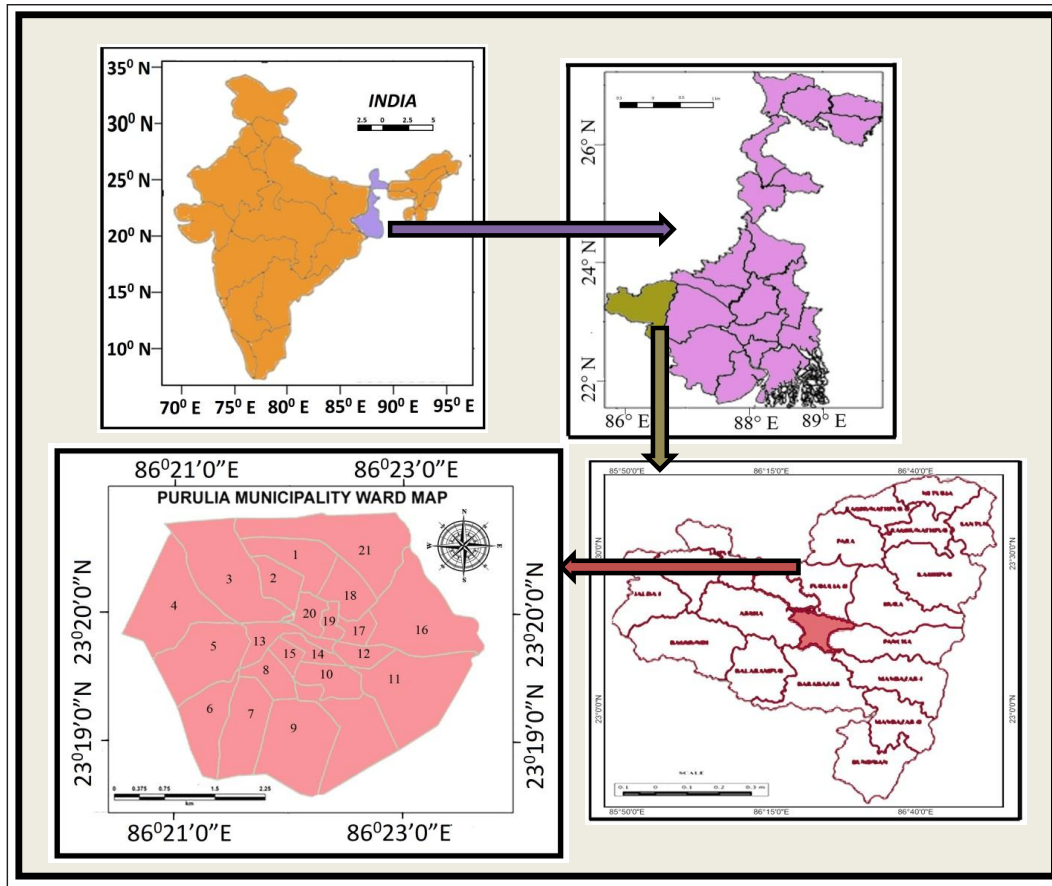


Fig. 1: Location Map of the Study Area

The percentage of urbanization is very low (12.75%) in Purulia than the average rate of West Bengal (31.89%) and India (31.16%) (Census of India, 2011). The growth rate of urban population is little much slower than the average rate of West Bengal. It is 142% in West Bengal and 13.3% in Purulia (District Census Handbook, Purulia, 2001, 2011). The District is surrounded by Bankura, Paschim Medinipur districts in the east, Bardhaman district of West Bengal state in the north, Dhanbad, Bokaro and Ranchi districts of Jharkhand state in the west and West Singhbhum and East Singhbhum districts of Jharkhand state in the south. Because of the close proximity to Jharkhand the intra-state connectivity is important for Purulia.

The town is well connected with the adjoining Jharkhand State as NH-32 has passed through the central part of the town linking Ranchi, the capital of Jharkhand. A major state highway has also passed through the town connecting national highway and Coal mines belt of Asansol and Burdwan district. It is well connected with Railways also. Asansol, and Durgapur are well linked with the state highway Barakar-Purulia Road and with National Highway

through Barakar-Asansol road. This town is well connected with another Sub-divisional town Jhalda and Raghunathpur. The industrial town Asansol and Durgapur is very close to the town. Purulia is a well-known land of natural beauty and home to cultural wealth. The luxuriant green landscape, short but lush hills and dense forests make it a perfect tourist destination that offers peaceful ambience and relaxing surroundings to exhausted city dwellers. This westernmost district of West Bengal unravels her untapped mystery and wondrous beauty. The landscape is rocky and undulating as it's the tract of Chottonagpur plateau of Bihar and Jharkhand. The tourism of Purulia encompasses around its hills, forests as well as its archeological excavations and the relics of ancient buildings and temples. Tribal ethos enriches the mystic charm and natural beauty of this land of red soil with further glorification by red blooms of Palash. The region is home to different tribal communities like Santhals, Kurmis, Kherias, Sabars, Birhors etc. Jhumur song and Pata dance and internationally famous Chhau dance are the intrinsic part in the lives of the tribal people which gives immense pleasure to the tourists coming from metropolitan cities like Kolkata in West Bengal and from other states of India.

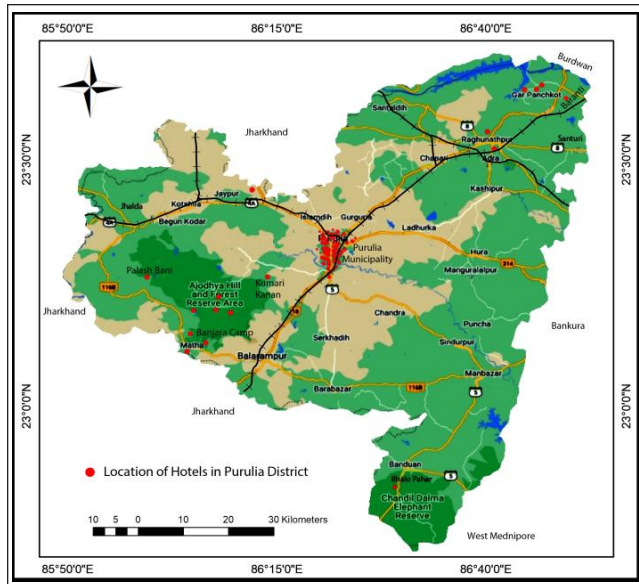


Fig. 2: Concentration of Hotels in Purulia District and in Municipality Town

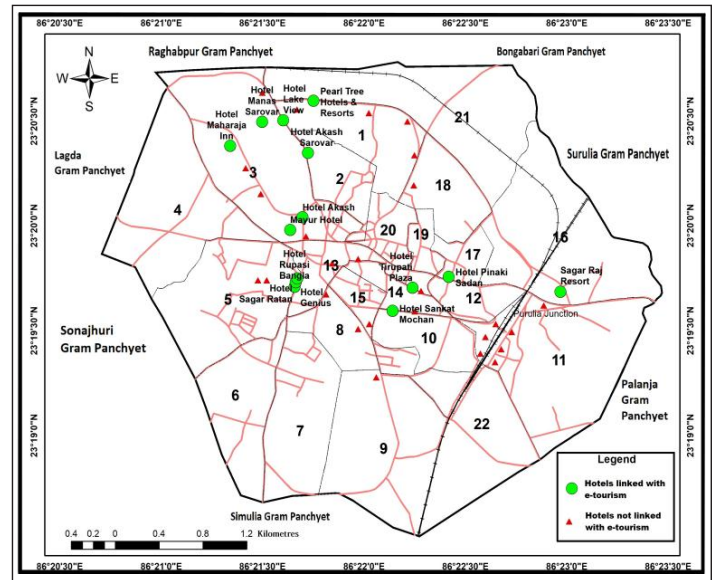


Fig. 3: Hotels in Purulia Town Connected with ICT and E-Tourism

The season for the tourists starts from November and continues up to March in every year. Tourists from different parts of West Bengal and also from other states of India come here in search of peace in every year. Most of the hotels in Purulia municipality have formed a node through their mutual network and provide further connectivity to the peripheral tourist sites by helping tourists for hotel booking, arrangement of transportation etc. In spite of the occurrence of hotels in different tourist spots in the district, the maximum hotels are situated in the municipality owing to its integrated transport connectivity and available facilities (Fig. 2). Among the 40 hotels in the Purulia municipality town, 14 hotels are actively associated with e-tourism in recent times (Fig. 3).

RESEARCH INSTRUMENTS

The steps involved in the study are as follows:

Step 1: Sample Selection and Characterization

At the preliminary step, all hotels and lodges (40) of Purulia municipality have been selected for the survey to identify the hotels and lodges those have been using Internet, online booking and linked with tourism websites. Among 40 hotels and lodges in the municipality town, 14 (35%) hotels have been selected as those hotels have been found to be connected with online tourism or e-tourism. A total sample of 650 respondents have been surveyed in between November, 2019 to March, 2020 as this time is the peak period for travelling in Purulia District. A structured questionnaire survey has been carried out among 450 respondents of the 14 hotels connected with e-tourism by simple and stratified random sampling. After completion of the survey it has been found that 50 of the responses became incomplete and non-responsive. The reason behind the incompleteness of the samples has been basically depended on the lack of time and interests of the tourists to answer the questions. A total of 400 samples have been finally selected for this study.

Table 1: Socio-Demographic Profile of the Respondents

Variables	Description	Number of Tourists (Frequency)	Percentage Distribution
Geographical Zones	1. Kolkata and Surroundings	295	73.75
	2. Northern districts of West Bengal (Siliguri, Duars, Maldah and N & S Dinajpur)	34	8.5
	3. Eastern districts of West Bengal (Nadia, Murshidabad)	26	6.5
	4. Other states of India and Bangladesh	45	11.25

Variables	Description	Number of Tourists (Frequency)	Percentage Distribution
Gender	Male	212	53
	Female	188	47
Age	<18 years	116	29
	19-25 years	154	38.5
	26-32 years	86	21.5
	33-39 years	25	6.25
	>39 years	19	4.75
Marital Status	Single	119	29.75
	Married	281	70.25
Educational Level	Below Higher Secondary	36	9
	Higher Secondary passed	54	13.5
	Graduate	138	34.5
	Post-graduate	93	23.25
	PhD	79	19.75
Occupational Level	Governmental Job	102	25.50
	Private Job	99	24.75
	Business	123	30.75
	Student	59	14.75
	Others	11	2.75
	Non-Workers	6	1.50
Internet Usage Behaviour (Average)	Use internet 1 hour a week	28	7
	2-3 hour in a week	61	15.25
	4-6 hours in a week	92	23
	More than 10 hours per week	219	54.75
Monthly Income (Average)	< 20000/-	36	9
	20000- 40000/-	266	66.5
	>40000/-	98	49.5

Source: Sample Survey, 2019-2020; Computed by authors.

It has been found from the socio- demographic details (Table 1) of the respondents that the majority of the tourists came from Kolkata and surroundings area (74%) among which 53% were male and 47% were female. The age of the respondents was maximally in between 19 to 25 years (39%) and 70% of them were married. Approximately 34.5% of the respondents were completed graduation level and majority of the respondent were engaged in business (30.75%). Maximum respondents was reported their average monthly income in between 20,000/- to 40,000/- (66.5%) and average internet usage behavior was more than 10 hours per week (54.75%).

Step 2: Design, Application and Development of the Instrument

An extensive literature survey may suggest the correlation of the variables which are mainly responsible for Tourists'

satisfaction and the questionnaire was framed according to those important variables. Different literatures have been studied to select variables or attributes to justify the interrelationship among the use of ICT, e-tourism and tourist satisfaction leading to revisit intention at the same destination. Campdesuñer et al. (2017) had used four (4) observed variables for satisfaction with lodging, access, attraction and facilities. These observed variables were connected with 31 latent variables depending on different criteria. Following the observed and latent variables asset of questions were set for the present study. Femenia-Serra and Neuhofer (2018) also had suggested research agenda in smart tourism experiences (STE) and included cross-cutting issues; in which psychological effects of STE, rapid technological evolution and many important variables were added. Um and Chung (2019) had initiated a broad assessment on smart tourism technology attributes and made almost nine (9) hypotheses on overall satisfaction of smart tourism city and constructed SEM equation. Accommodation, Amenity,

Attraction, Access etc. were included which helped to determine latent variables in the present study. Majeed et al. (2020) had emphasized on tourist satisfaction to construct SEM based on Tourist Destination Online Content (TDOC), User- Friendly Accessibility (UFA), Satisfaction (S), Tourist Behavioural Intention (TBI), Intentions to Visit Tourist Destination (IVTD) and Electronic word-of-mouth (e- WOM). It has been found that not all the variables may applicable for the present study but necessary variables with areal specificity were selected.

The design of the instrument was done in two stages. First, the formation of 31 variables or attributes was identified through extensive literature survey and evaluation of three experts. After revision, elimination of 12 variables has been done as those variables were not being validated by 80% of the evaluator. Inthe next stage, taking the 19 variables, 4 groups have been selected. They are Satisfaction with the Use of Internet (SUI) - 4 variables, Satisfaction with Travel Experience (STE) – 7 variables, Satisfaction with Safety and Security (SSS) – 4 variables and Satisfaction and Revisit Intension (SRI) – 4 variables. This quantitative stage was started with the design of a survey in which the satisfactions of the tourists have been evaluated through a likert scale ranging from 1 to 5. The value 1 and 5 denoted strongly dissatisfied and strongly satisfied respectively. It has been analysed and established that due to the non-existence of stringent rule for selecting the latent variables, researchers may accept or neglect the existing variables both for observed and latent as per the needs of their studies (Ropovik, 2015) and research design. To evaluate the interrelationship between observed variables and the existent latent constructs SEM has constructed through further steps.

Step: 3 Calculating Reliability and Validity and Factor Analysis of the Dataset

The data collected from 400 tourists on the basis of 19 variables were set for further analysis. IBM SPSS 23 statistical package have been used for conducting the quantitative analysis. Chronbach’s Alpha (α) have been calculated for each dimension (Table 2). To evaluate the correlation among the latent variables with their respective attributes related to the destination, it was inevitable to measure the validity of the data first. The value of alpha (α) above 0.70 is acceptable and 0.80 or greater is preferred (Cortina, 1993). Here the Chronbach Alpha value for each latent variable has been demarcated towards the acceptability of reliability. After that a Confirmatory Factor Analysis (CFA) has been performed to identify the factorial structure of theset of observed variables. A detailed discussion of CFA has been done in the later result portion.

Table 2: Test of Validity and Reliability of the Dataset.

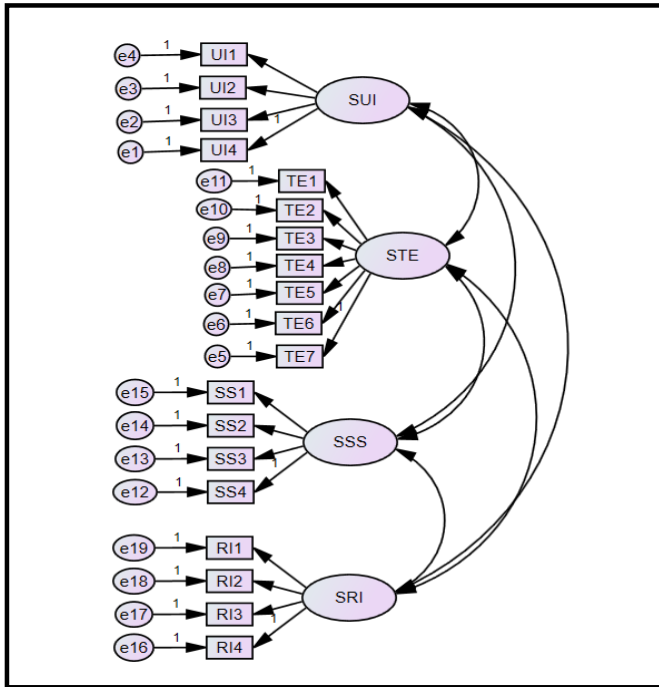
Selected Variables	Chronbach Alpha (α)
Satisfaction with the Use of Internet (SUI)	0.921
Quality of online information (UI1) Quality of online information meet needs and expectations (UI2) Online view of Aesthetic location (UI3) Problem free transaction (UI4)	
Satisfaction with Travel Experience (STE)	0.867
User friendly and accessible online contents (TE1) Online booking creates a good image to the reception (TE2) Easy trip- schedule possible after booking (TE3) Online comment share via social media to encourage others (TE4) Online feedback to help tourism websites to develop themselves (TE5) Quality of online- booked hotels i.e. cleanliness and comfort (TE6) Online advertisement about the quality of food and beverages (TE7)	
Satisfaction with Safety and Security (SSS)	0.743
Feel online safety for transaction (SS1) Equity in information of website and reality (SS2) Tension free and safe travel (SS3) Costing satisfaction with transportation and hotel- rates (SS4)	
Satisfaction with Revisit Intension (SRI)	0.961
Natural beauty, Chhau dance and tribal life-style attracted (RI1) Satisfied with Google map to search unknown locations (RI2) A short tour with whole family satisfaction (RI3) Tourism website made the tour easy for future too (RI4)	

Source: Computed by authors, 2020.

Step 4: Construction of the Structural Equation Model

After confirming the dimensions and factor loads of the variables, a proposed Structural Equation Model has been done by IBM SPSS AMOS 23 software. The model is used to find the structural relationship among the latent variables (Aktepe et al., 2015, Kesari & Atulkar, 2016). To evaluate

the fit of the data to the proposed model (Fig. 4), three alternatives may be used, Evaluation of global model fit, evaluation of the adjustment of the measurement model and measurement of the structural model (Hooper et al., 2008).



Source: Prepared by Authors, 2020.

Fig. 4: Proposed Model

The fit output contains a large array of model fit statistics. All are designed to test or describe overall model fit. Each researcher has his or her favorite collection to fit statistics to report (SEM using AMOS, The University of Texas, Austin). The application of the structural equation model is justified since it allows to test theoretical models with empirical data (Campdesuñer et al., 2017). The model has been proposed after due consideration of different satisfaction attributes of the tourists as well as hotels and which attributes have to be given more importance under which satisfaction circumstances. The correlation among different satisfaction attributes have also taken under measure as their correlation may define the importance of observed variables attached with them.

RESULTS

Section I

Factor Loadings for the variables have been achieved through Confirmatory Factor Analysis (CFA) and factorial loads less than 0.70 were eliminated. Those variables contained a load of <0.07 were eliminated from the dataset (Nunkoo & Ramkissoon, 2013). Two variables, Problem

free transaction (UI4) and online booking created a good image to the reception (TE2) were thus eliminated as their value was <0.07 (Table 3).

Table 3: Rotated Component Matrix

Variables	Latent Variables			
	1	2	3	4
UI1	.946			
UI3	.942			
RI2	.939			
RI3	.937			
TE6	.929			
RI4	.915			
UI2	.908			
TE3	.807			
RI1	.805			
TE1	.803			
UI4	.665		.579	
TE2	.664		.587	
TE7		.977		
TE5		.973		
TE4		.972		
SS2			.852	.359
SS4			.851	.357
SS3				.887
SS1				.877

Factor loading values have been considered >0.70
 Extraction Method: Principal Component Analysis
 Rotation Method: Varimax with Kaiser Normalisation (Rotation converged in 5 iteration)
 Kaiser- Meyer-Olkin Measure of Sampling Adequacy: 0.701
 Bartlett's Test of Sphericity, Approx. Chi- square: 19627.829Sig:0.000; Total variance explained: 86.349.

Source: Computed by Authors, 2020.

Varimax has been used and Kaiser-Meyer-Olkin Measure of Sampling Adequacy has indicated 0.701 which implies therefore the medium (0.7012 = 50%) reliability to run the dataset. Total variance Explained has been achieved 86.349% which indicate a good consistency.

Section II

Rotated component Matrix gave a number of grouping variables as there were 4 main latent variables were extracted. As per the grouping of the variables in the 4 different groups, 4 latent variables or dimensions (Table 4) have been identified or reformed:

1. *Quality of Travel Satisfaction (QTS)*: Determinant variables contain the travel satisfaction among the

- tourists dominated by the quality of travel satisfaction, i.e., quality of online information, quality of hotels etc.
- 2. *Satisfaction with Travel Websites (STW)*: Cooperation of the travel websites were the dominating factor here and online feedback, comments etc. took the dominant positions.
- 3. *Satisfaction with Quality of Information (SQI)*: Gathering of quality information about the destination and be sure with the reality with costing and equity in information were determined by this factor.
- 4. *Psychological Status of Tourists (PST)*: Online transaction and tension free secured travel made the factor as tourists’ psychological status has been given importance to all tourism sectors.

Table 4: Convergence of Groups through CFA

Grouping Variables	Suggested Name for Grouping variables
UI1- Quality of online information	Quality of Travel Satisfaction (QTS)
UI3- Online view of Aesthetic location	
RI2- Satisfied with Google map to search unknown locations	
RI3- A short tour with whole family satisfaction	
TE6- Quality of online- booked hotels i.e. cleanliness and comfort	
RI4- Tourism website made the tour easy for future too	
UI2- Quality of online information meet needs and expectations	
TE3- Easy trip- schedule possible after booking	
RI1- Natural beauty, Chhau dance and tribal life-style attracted	
TE1- User friendly and accessible online contents	
TE7 - Online advertisement about the quality of food and beverages	Satisfaction with Travel Websites (STW)
TE5- Online feedback to help tourism websites to develop themselves	
TE4- Online comment share via social media to encourage others	
SS2- Equity in information of website and reality	Satisfaction with Quality of Information (SQI)
SS4- Costing satisfaction with transportation and hotel- rates	
SS3- Tension free and safe travel	Psychological Status of Tourists (PST)
SS1- Feel online safety for transaction	

Source: Computed by Authors, 2020.

The influence of these 4 satisfaction groups and related observed variables has to be judged as their combinations and occurrences have changed after CFA analysis.

Section III

Final Structural Equation Model

A necessary adjustment has made as CFA results a different grouping of variables and it has considered that the grouping variables with their co-relation and co-variance will results more effective model fit, the proposed model has been reconstructed (Fig. 5).

The final model has contained both latent (unobserved) and manifest (observed) variables. Hence, the limitation has been bounded that no causal relationships among latent variables have been identified and only correlation or bi-directional relationships has drawn. According to the results, the variables that integrate with the selected dimensions have shown high degrees of relationship (nearer to 1.0) with the latent variable to which they belong. The correlations among the latent variables have not been seen as strong (farther from 1.0) as the latent variables have correlated with their divergent observed variables (Fig. 5). Correlation in between the error terms, i.e., e3-e4 and e11-e12, the covariance has done to minimize the error and to form them better indicators of their respective latent variable.

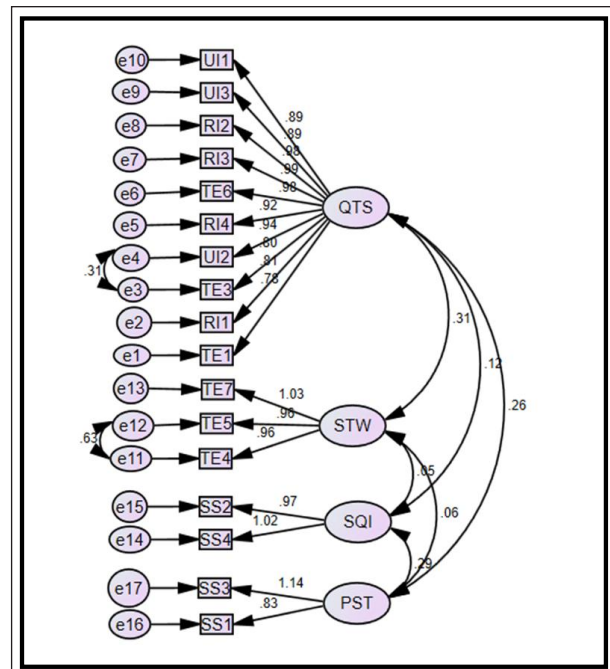


Fig. 5: Structural Equation Model (Constructed by IBM SPSS AMOS)

Structural Equation Models are simplified measurement equation for exploring structural relationship among

measured and latent variables (McDonald & Ho, 2002) and are globally accepted to analyze the fit indices (Nunkoo & Ramkission, 2013) in social and ecological sciences. These indices were developed under different theoretical contexts

(Fan, Thompson & Wang, 1999) and probable debates and confusion exist about their appropriate use. After going through extensive literature survey, the following indicators have been evaluated for the generated model fit (Table 5).

Table 5: Indicators of Evaluation of the Value of the Generated Model

Indicators	Acronym	Contrast Value	Reached Value	Evaluation	Supportive Literature
Chi-Square value/Degrees of Freedom	CMIN/DF	<3- Good	4	Nearer to be good	Barrett (2007)
Probability level associated to Chi-square value	Probability Level	>0.05- Significant	0.06	Significant	Tabachnick and Fidell (2007)
Comparative Fit Index	CFI	>0.95- Great >0.70- Acceptable	0.713	Acceptable	Hu and Bentler, (1999)
Normed Fit Index	NFI	Closer to 1- Better fit >0.70- Moderate fit	0.709	Moderate Fit	Bentler and Bonnet (1980)
Parsimony adjusted NFI	PNFI	>0.50- Acceptable	0.578	Acceptable	Mulaik et al. (1989)
Root Mean Square Error of Approximation	RMSEA	<0.05- Good 0.05-0.10- Moderate	0.061	Moderate	Hu and Bentler (1999)

Source: Prepared by authors, 2020.

The values associated with each path are standardized regression coefficients. These values represent the amount of change in Y given a standard deviation unit change in X. On the other hand each unstandardized regression coefficient represents the amount of change in the dependent or mediating variable for each one- unit change in the variable

predicting it (Hooper et al., 2008). The fact is that here the standardized coefficient values have been specified (Table 6) as the correlation among latent variables and observed variables has been indicated rather than casual relationships among the variables.

Table 6: Standardized Regression and Regression Weights

			Regression Weights	Standardized Regression Weights	S.E.	C.R.	P Value
TE1	<---	QTS	1.000	.783			
RI1	<---	QTS	1.039	.807	.056	18.412	***
TE3	<---	QTS	1.060	.799	.058	18.191	***
UI2	<---	QTS	1.941	.941	.085	22.822	***
RI4	<---	QTS	1.854	.916	.084	21.940	***
TE6	<---	QTS	1.838	.983	.075	24.405	***
RI3	<---	QTS	1.889	.988	.077	24.581	***
RI2	<---	QTS	1.880	.977	.078	24.184	***
UI3	<---	QTS	2.377	.891	.113	21.108	***
UI1	<---	QTS	2.416	.895	.114	21.217	***
TE4	<---	STW	1.000	.959			
TE5	<---	STW	.996	.964	.012	82.942	***
TE7	<---	STW	1.073	1.028	.021	51.039	***
SS4	<---	SQI	1.000	1.025			
SS2	<---	SQI	.953	.968	.017	55.776	***
SS1	<---	PST	1.000	.831			
SS3	<---	PST	1.639	1.136	.101	16.235	***

*** $p \leq 0.00$

Source: Computed by Authors, 2020.

DISCUSSION

The measurement model have been based on the variables studied in existing literature regarding satisfaction of the tourists with the use of internet and taking part with e-tourism at destination (Majeed et al., 2020; Lončarić et al., 2019; Lama et al., 2020). In the model the Quality of Travel Satisfaction (QTS), Satisfaction with Travel Websites (STW), Satisfaction with Quality of Information (SQI), Psychological Status of Tourists (PST) have been analyzed and it has been found that the latent variables act independently and are not strongly correlated. Differences may have associated with the result or nomenclature to name them, but generally they coincided (Campdesuñer et al., 2017) with the attitude of the latent variables considered as Quality of Travel Satisfaction, Satisfaction with Travel Websites, Quality of Information and Tourists' Psychology.

The most interesting change has observed in excluding the variables i.e., problem free transaction (UI4) and online booking create a good image to the reception (TE2). In consistent with the previous report of Khare and Khare (2010), where he has shown that tourists are sceptic and of two minds with the online transaction while sending money either through travel websites or directly for the reservation of hotels and meals. In contrast to the observation of Majeed et al. (2020) where the online hotel booking has gained an image to the hotel reception very strongly, the present study however has shown low factor loading for the same variable. The explanation behind the contrasting observation lied in the fact that all tourists have gained same importance for the hotel receptionist irrespective of how they booked hotel either online or not. Therefore, it may be inferred that the variable may not be applicable for small towns where e-tourism has started just only few years ago and the business holders have tried to make profitable services with tourists' satisfaction.

The quality of travel satisfaction depends on the quality of information tourists have gained online, the aesthetic view of the destination and tourist spots, help of Google maps to reach tourist spots, quality of hotels in terms of cleanliness, tourism websites to help future tours and met all expectations, for making trip-schedule etc. (Majeed et al., 2020; Lam et al., 2013; Gunawan, 2017). Interestingly all of these attributes have made the tourists' satisfaction as major controlling factors, similarly as found in the earlier studies (Ravikumar et al., 2019; Viet et al., 2020). Tourists' satisfaction was found associated with their revisit intention to the same tourist spot and life satisfaction as revealed by Ravikumar et al. (2019). In this study, it has been found that the attraction of natural landscape together with calm and peaceful environment, chhau dance and tribal life-style have been acting as pulling factor for tourists coming from Kolkata and surroundings where they unleash themselves from tiring

confinement in the lap of the nature. Additionally, the overall satisfaction of the quality of travel with user friendly and accessible online services for perfect planning and executing the total tour schedule has motivated the tourists to visit Purulia repeatedly.

Online comments in social media to encourage others and online feedback for tourism website have a huge impact on the expansion of information and travel satisfaction as stated in the study of Femenia-Serra and Neuhofer (2018). Travel websites also have created an online advertisement facilities to make the business more profitable (Lam, 2013). The present measurement model reflected the same trend where the study has shown that tourist satisfaction with travel websites (STW) holds a strong relationship with the three variables analyzed i.e., online advertisement about the quality of food and beverages, online feedback and online comment shared via social media linked to the websites. Quality information furnished in the smart mirror in virtual reality technology have been a trick to boom modern tourism industry through fulfilling the desire of the tourists and to meet their satisfaction (Tussyadiah et al., 2018; Young et al., 2020). Despite the limited studies between virtual reality and its authenticity in tourism, however, Mura et al. (2016) showed a tentative trend in acceptability. Information and Communication Technology (ICT) has taken a vital role to create a smart virtual environment in the tourism sites by creating updated and smart information to the tourists and made it reliable (Um & Chung, 2019; González-Rodríguez et al., 2020). In congruence with their perception, the present work verified that equity of information and costing satisfaction has maintained a very strong relation with Satisfaction with Quality of Information (SQI).

Life satisfaction is one of the main motivators which play an important role in the flourishment of Tourism. People are always in requirement of a smooth, hassle-free and safe travel. It has been corroborated with the report of Lončarić et al. (2019) that the psychological satisfaction has been incorporated with overall satisfaction of the tourists. In this study, Psychological status of the tourists (PST) has been found to be largely dependent on tension free and safe travel. Secure online transaction has been identified as another significant parameter in governing overall satisfaction of tourists coming to Purulia with the help of e-tourism. The study clearly indicated that any discrepancies linked with financial transaction may lead to psychological dissatisfaction throughout the tour.

CONCLUSION

The dataset that has facilitated the generation of measurement model depicts the logical explanation that each of the latent variables may be treated as independent variable. However, the correlation among the latent variables has been found

to be significantly poor. The quality of travel satisfaction (QTS) has been identified as the key determinant in modulating tourist satisfaction that in turn directly influences e-tourism. At the same time, the observed variable in terms of trifling subjective satisfaction should be handled with care as these observed variables delicately execute shaping socio-economic changes through the growth of e-tourism. The scope of this research is therefore, may be considered as a causal relationship analysis with the aspects of tourist satisfaction that may be addressed by the government and private tourism planner for better management and execution to accelerate socio-economic development through e-tourism. The immense prospect of flourishing e-tourism in a small urban town like Purulia due to its natural beauty, internationally famous chhau dance, tribal cultural heritage and peaceful environment may be capitalized by competent authorities and stake holders through proper management and maximization of ICT use in e-tourism in this regional tourist destination site. Moreover, the present study further predicts a route map for the section where maximization of ICT may exert its best effect in thriving e-tourism in this region. Although, the measurement model may serve as a prototype for similar kind of urban center, however, it may not fit well to other unrelated urban centers limiting its applicability in restricted region only.

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