SUSTAINABLE TOURISM AND RESIDENTS' SATISFACTION: AN EMPIRICAL ANALYSIS OF UNESCO WORLD HERITAGE SITES IN DELHI (INDIA)

Suman Lata*, K. Mathiyazhagan**, Aruditya Jasrotia***

*Assistant Professor, Amity Institute of Travel & Tourism, Amity University, Noida, Uttar Pradesh, India. Email: sumanrana890@gmail.com

**Assistant Professor, Department of Mechanical Engineering, Amity School of Engineering & Tech. (ASET), Amity University, Noida, Uttar Pradesh, India. Email: madii1984@yahoo.com

***Assistant Professor, Amity Institute of Travel & Tourism, Amity University, Noida, Uttar Pradesh, India. Email: arudityajasrotia@gmail.com

Abstract

The aim of this paper was to determine the influence of four dimensions of sustainability (environment, economic, socio-cultural and institutional) on satisfaction in the context of residents in the UNESCO heritage place. Data was collected from resident's regarding the three UNESCO world heritages in Delhi. These heritage sites are Red Fort, Qutub Minar, and Humayun Tomb. The responses were taken from 220 residents of Delhi. Data were analyzed by using structural equation modeling by performing partial least squares (PLS). The findings of this study state that economic, socio-cultural and institution positively influence the residents' satisfaction whereas the environmental dimension of sustainability was not found a significant predictor of residents' satisfaction. This study provides implications for local residents', government and private players. There is a need to put more consideration on economic dimension so that benefits gets transfer to local community and economic leakages get reduced. This study has conducted in Indian context so the findings can't be generalized for other countries. This is one of the few studies which have conducted in UNESCO heritage sites contexts in India.

Introduction

A debate on various environmental concerns occurred in various parts of the world in the 1980s in which the involvement of local people and government were taken (Cottrell et al., 2013). To get the solution to this serious issue, discussions on sustainability have gained highly consideration (Liu, 2003; Aydin & Emeksiz, 2018). So the concept of sustainability came when stress was put on to preserve, protect, and conserve for the future (Tao & Wall, 2009). It is less than two decades before when peoples were awakened and consciously think about resource preservation. World Commission on Environment and Development (WCED, 1987) states that "Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition of sustainable development was further integrated in The Earth Summit in 1992 when it made some principles for sustainable development and put them into action (Cottrell et al., 2004). The "sustainable" notion is becoming progressively more prominent and increasingly focus for environmental concern (Becker & Jahn, 1999). To make heritage destination sustainable, The United Nations Education, Science, and Cultural Organization (UNESCO) have published a listing of World Heritage Sites in acknowledgment of the excellent worldwide significance of these destinations that must be conserved and preserve for next generations. The recognition of a particular place or area as World Heritage assures that the specific place has some value in the perspective of history or art and must be preserved in order to pass it to future generations (Saipradist & Staiff, 2007). Therefore, it is important to care for these places to evade negative impacts that happen due to various actions (Pereira & Van, 2011), especially in tourism context. The primary focus of the UNESCO sites is to make preservation and conservation of these places to increase the tourists' arrival from across the world to build a strong relationship between UNESCO published sites and tourism (Breakey, 2012). Tourists wish to visit and want to experience an authentic destination with enriching history (Timothy & Boyd, 2006), and UNESCO acknowledgment has built this strong connection. In heritage tourism, tourists are more interested to know the narratives, history, and background of those destinations. So, various sustainable approaches are followed for the protection and conservation of these sites (Salazar & Yujie, 2015). Tourist's satisfaction and evaluation helps to increase the destination

stature and force tourists for revisit and to recommend others (Alegre & Cladera, 2006). Moreover, the studies which ponder on the world heritage sites and tourists' satisfaction might be instrumental to throwing light on some contemporary and relevant issues such as the understanding of tourists' satisfaction of world heritage sites and examining the tourists demand at destination (Mariani & Guizzardi, 2020).

Past literature studied studies residents' satisfaction indifferent contexts. Ng and Feng (2020) postulated that how residents' sense about the world heritage sites in their place and how it influence them to involve in tourism. Further, Ganon, Rasoolimanesh and Taheri (2020) examined the community attachment, attitude and involvement impact on tourism development. Some other studies like economic gain (Rasoolimanesh et al., 2015), cultural attitude (Rasoolimanesh et al., 2017) residents' attachment (Gursoy et al., 2002) has been also done in relation with residents' satisfaction. However, the research that how sustainability dimensions impact the residents' satisfaction at UNESCO world heritage sites is at the early stage. Therefore, this paper has taken an effort to determine the influence of four sustainability dimensions to predict residents' satisfaction along the development of sustainable tourism in UNESCO World heritage sites in Delhi using hypotheses. In this study, four hypotheses considered and analyzed with the help of SEM using Partial Least Square (PLS) software. The present study was divided into various sections: Section 2 provides the existing literature regarding indicators of sustainability and prism of sustainability (social, economic, environmental and institutional) and it has discussed about the UNESCO world heritage sites in Delhi and hypotheses development. Further, research methodology (Structural Equation Modeling in Partial Least Square) is mentioned in section 3. Moving on, section 4 has discussed about the data analyses and obtained results in section 5. Finally, the summary and managerial implications of the study have presented in section 6. The flow chart of the study is illustrated in Fig. 1 with the necessary details.

Literature Review

A comprehensive review of previous studies has been extensively thrown light on UNESCO world heritage sites. Various researchers in management and economics have been studied World heritage sites rigorously. The main concern of UNESCO is to protect, conserve and preserve the attraction that

have outstanding universal value to be considered as "concept of value based human perception". It indicates UN convention mainly indicates to protect world heritage sites for future generations. However, under the benefits of WHS designation, UNESCO has also registered so that tourism activities can be promoted on destinations and also some benefits to be provided to the local residents' (UNESCO, 2008). The impact and implications WHS has been studied worldwide in different field. Mainly these studies has been conducted in management and economics. Studies which has conducted in past literature are (Buckley, 2018; Frey & Steinar, 2013; Poria, Reichal & Cohen, 2013; Seyfi, Hall & Fagnoni, 2018; Menegaki & Tugcu, 2018).

With the arrival of tourists visitor and development of tourism at destination, enhances benefits among local community. It increases the local business and make robust the locals and tourist interaction, directly influences design and function of destination and local community's behavior therein (Almeida-Garcíaetal, 2016; Andereck et al., 2005; Kim et al., 2013; Rasoolimanesh et al., 2017; Vareiro et al., 2013). In addition the behavior and lifestyle of local residents' impacted by tourists' arrival (Jaafer et al., 2017). The development at destination stimulates the economic, socio-cultural and environmental changes in lical residents' (Rasoolimanesh et al., 2015). The development done with proper care and proper planning helps to provide economic opportunities, higher wages, higher living standard etc. (Rasoolimanesh et al., 2017).

The present studied has applied prism of sustainability model proposed by Spangenberg and Valentine (1999) has taken to measure the impact of sustainability four dimensions on residents' satisfaction. Spangenberg (2002) stated that previously there were only three dimensions of sustainability which were used in literature i.e. Environmental, Economic and Socio-Cultural. Eden et al. (2000) postulates that it is important to add institutional dimension for management and growth, and to achieve an equilibrium among these three dimensions. Further, all these four dimensions were merged together and a new framework was constructed which was named as "the prism of sustainability" as in Fig. 2. Various indicators given by CSD and WTO were discussed in this section. This study has taken UNESCO world heritage sites situated in Delhi. Extensive literature review, hypotheses development, and study area description have been tabulated in Table 1.

Table 1: Various Studies of UNESCO Heritage Site from Literature Review

Authors	Kind of Study	Approach	Tools	Limitations	Analytic Unit
Bak et al. (2019)	Survey	Quantitative	PLS	This study has only focused on the relationship between UNESCO world heritage and its effect on tourism.	International Tourist
Canale et al. (2019)	Thoertical	Quantitative	Panel data	This study mainly discuss about the WHS and tourism attractiveness only and has ignored the other dimensions like tourist satisfaction, residents' satisfaction etc.	International Tourist
Guo and Chung (2019)	Thoertical	Quantitative	SEM	This study has pointed on tourism carrying capacity to manage the UNESCO geo parks. It focused on only environmental dimension of sustainability.	Local Community
Yang et al. (2018)	Action Research	Quantitative	Satellite Imagery	This study has focused on ecological issues of WHS by ignoring the other dimensions.	Local Community
Korneevets et al. 2018)	Theoretical–conceptual	Quantitative	Mixed Method	This research has also focused on environment concerns only and has ignored the other dimensions.	International Tourist
Liburd and Becken (2017)	Theoretical	Qualitative	Interview	This paper examine to understand the protected area in Australia's great barrier reef and how world heritage stewards are participating in it. But it has mainly focused on environmental concerns only.	Local Community
Kessel et al. (2017)	Action Research	Quantitative	Bayesian Model	This paper has focused on two dimensions. i.e. economic and environmental only.	Local Community
Amir et al. (2017)	Survey	Qualitative	Interview	This study focused on the perception of government officers and tourist players to analyse the tourists' expenditure pattern.	Local Community
Amir et al. (2017)	Survey	Quantitative	ANOVA	This study has examined the spending pattern of domestic and inbound tourists. This study has limited it with socio-demographic factors only.	Local Community

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Authors	Kind of Study	Approach	Tools	Limitations	Analytic Unit
Amir et al. (2017)	Survey	Quantitative	Chi Square	This paper has studied the tourist spending and their benefits to local community. Through this only local community' economic satisfaction cane be examined.	International Tourist
Cuccia et al. (2017)	Theoretical	Quantitative	DEA	This study has been limited it to the inscription of world heritage sites and tourism development only.	International Tourist
Guzman and Gonzalez et al. (2016)	Theoretical– conceptual	Quantitative	SEM	This study has mainly centered on understanding of key factors involved in relationship between intangible cultural heritage and tourism development.	International Tourist
Cuccia et al. (2016)	Case Study	Quantitative	DEA	This study has also limited to the cultural aspect of the destination only.	International Tourist
Sayre et al. (2015)	Action Research	Quantitative	Field work	This destination study has limited to the ecological and cultural aspects only.	Local Community & International Tourist
Yap and Saha (2013)	Action Research	Quantitative	Panel data	This study has examined the institutional dimension in which it has evaluated the political stability, terrorism and corruption on tourism development. But it hasn't included the other dimensions i.e. ecological, economic and social.	International Tourist
Piccolo et al. (2012)	Case Study	Quantitative	PLS	This study has limited on destination policy and planning only.	International Tourist
Ryan et al. (2011)	Theoretical	Qualitative	Interview	This study has explored various issues in sustainable tourism by including social, economic and environmental aspects. But it has still ignored the institutional aspect in this study.	International Tourist

The above mentioned literature depicts that there are very few or no study has been conducted by taking all four dimensions of sustainability. Most of the studies has taken only one dimension while examining the effect of tourism development on destination. Second, most of the studies have focused on tourists' perspective instead of residents perspective. Various studies that are conducted in past literature has mainly focused on tourists satisfaction (Bak et al., 2019; Canale et al., 2019; Amir et al., 2017; Cucia et al., 2017; Yap & Saha, 2017). So the studies on residents' satisfaction are still at the nascent stage. Third, based on the above review of literature it was evident that very few studies have focused to evaluate the UNESCO heritage places in the India. Further, the different tools like SEM, PLS and AMOS have been widely used by the researchers. Meanwhile, very few case studies have been conducted in the past. Apart from these in all the studies the units of measure were local community and international tourist. Keeping this in mind, the authors proposed to develop a model using the findings from the review.

Indicators of Sustainability

In 1995, for the enlargement of indicators of sustainable development, a program was launched by The United Nations Commission on Sustainable Development (CSD). After five years, these indicators were recognized in various countries. These indicators primarily focused on regional, national and global levels by considering their physical environment. Eleven core indicators were defined by the World Tourism Organizations (WTO), categorized into ecological, social, economic and planning. Out of these eleven, nine were considered as physical indicators and two were considered as psychological indicators. Inspite of WTO's great efforts, it was not able to prove the choice of indicators, less stakeholder participation, lacked in the consideration of local indicators and unable to give a clear framework for monetary policy to convert indicator into practical actions (Twining-Ward & Butler, 2002). A five-year program was started by CSD in 1995 for the formation of sustainability indicators on global level in which it especially focused on environmental sustainability (Cottrell et al., 2013). Researchers have paid attention on the development of sustainable tourism indicators by making the participation of local residents' (Spangenberg, 2002). Yuan et al. (2003) examined the development of local indicators in Chongming County, Shanghai, China, Daymond (1999) focused on Newzland, Twinning-Ward and Butler (2002) focused on Samoa. Some other researchers conducted the same work (Hughes 2002; Innes & Booher 2000; Miller, 2001; Camilleri-Fenech et al., 2020). The first noteworthy contribution of tourism was recognized in the RIO+20 outcome documents "The Future We Want" (UN General Assembly, 2012), held in 2012 where it was considered as prominent area and worldwide

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issue of how tourism can be a vehicle for sustainable development three dimensions.

UNESCO World Heritage Sites

Di Giovine (2009) refers to WHS in his study as Heritage-Scape which plays a significant role in attracting and fascinating tourist to visit this destination by providing its heritage value. However total 911 sites have listed in UNESCO world heritage sites which are considered outstanding and valuable destinations by global community. In these sites 704 are cultural sites, 180 are considered as natural sites, and 27 are mixed sites. The WHS is regarded as a brand which increasingly persuades tourist to visit the destination (Poria et al., 2013). It is essential to preserve these places and cities by maintaining a strong liaison among local community, private players and visitors (Roders & Oers, 2011). Therefore, acknowledging these places as World Heritage Sites signifies the conservation of these sites for future generations and further developing it for tourism purposes (Landorf, 2009). In addition, it is important to know the carrying capacity of the destination to maintain sustainability. It is important to know the motivation of travelers by segmenting them into different types and as well as the predictors behind their satisfaction. It plays an imperative role in development of tourism policies of destination. Brida et al. (2010) state that the growth of sustainable development at tourism places are getting highly noteworthy for all stakeholders. Existing literature has mainly paid attention to the satisfaction of tourism operators and the tourists' satisfaction, but research on residents' satisfaction with sustainable development is still at the nascent stage (Cottrell et al., 2013). This study has taken an attempt to inspect the influence of four sustainability dimensions (environmental, economic, socio-cultural and institutional) in predicting residents' satisfaction with the sustainable tourism development in UNESCO heritage sites in Delhi. Also for this study, the data was collected from a sample of 220 tourists from Red Fort, Qutub Minar, and Humayun Tomb, UNESCO world heritage sites in Delhi, India. There are 37 sites recognized as world heritage sites in India out of which 29 are counted as cultural sites, seven are considered as natural sites and one is mixed site. India has attained sixth rank for having such beautiful and number of UNESCO sites. Delhi the capital city of India is so famous for its rich heritage destinations and fascinate thousands of tourists to visit these places. The foreign tourist arrival in 2017 in Delhi was 2740502 which are 10.2% of total tourist arrival in the country (tourism.gov.in, 2018). The busiest airport where tourist avail e-tourist visa was Delhi airport and the no. of tourist arrival at Delhi airport was 75,1339 (tourism.gov.in, 2018).

Case Description

The Qutub Minar, Red Fort, and Humayun Tomb, UNESCO world heritage sites located in Delhi. India is a country where numerous tourists visit every year. Qutub Minar is the highest minaret in India and tallest stone masonry tower in the world. There are 379 steps in its staircase joined to five balconies inside the building. The construction of the building started in 202 by Qutub-Din-Aibak but its construction stopped at first story. The original tower was one story building only but later rulers Muhammed Bin Tughlaq and Firoz shah tughlaq added more stories and chambers in the building. Red Fort is a wall made of red sandstone rising 33m above the clamour of Old Delhi. It was built in 1638 and the main purpose behind its construction was to keep the invaders out. Its main gate the Lahore Gate is a big attraction for the tourists and especially on Independence Day there is a major crowd. Humayun's Tomb was built by the most senior widow Bega Begam in the year 1565 A.D. This garden tomb is located near crossing of Mathura road and Lodhi road and is the example of first Mughal architecture in India. This paper employs a sustainability framework as a means to examine tourist's satisfaction from tourism development at UNESCO heritage sites in Delhi. This approach examines the environmental, economic, socio-cultural and institutional parameters for the sustainability of heritage sites. If these four dimensions of sustainable tourism are generalizable as suggested by prior research (Spangenberg, 2002; Spangenberg & Valentin, 1999), all four predictors should influence residents' satisfaction for the sustainability of heritage destinations.

Research Methodology

In order, to fulfill the objectives of the study, the researchers have used a questionnaire to understand the in the Indian context. Furthermore, the following section describes about the instrument development, data analysis (AMOS) & (PLS) followed by empirical analysis as in Fig. 1. In this study, PLS is used because it meets the condition of non-normality (Chin, 1998b), and as well as it is suitable to apply PLS for small data.
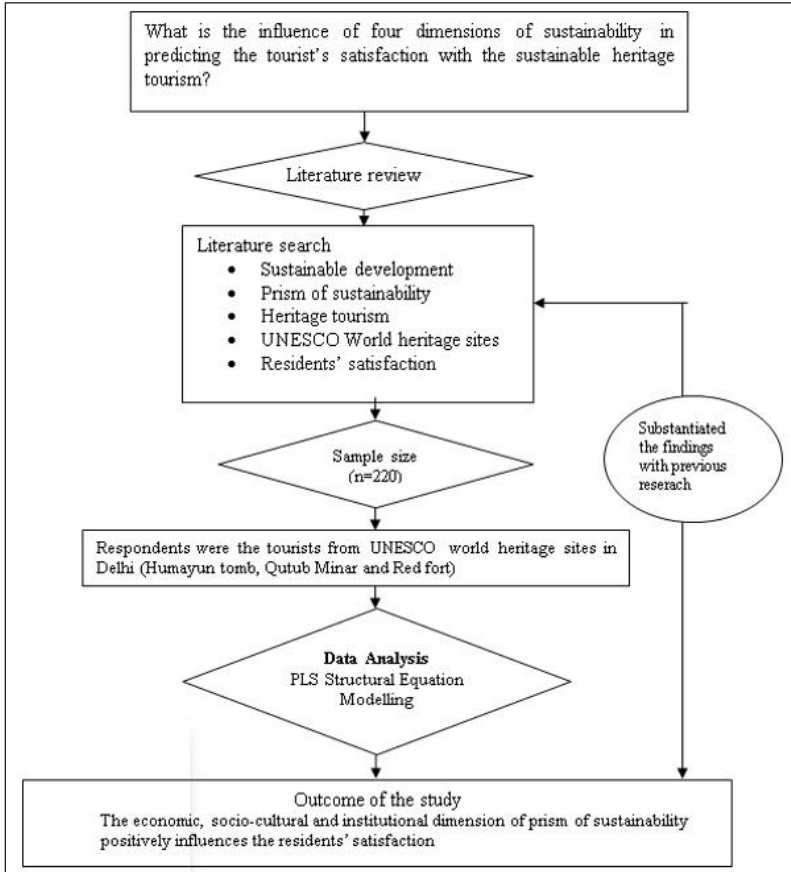
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Fig. 1: Research Flowchart for the Study

Domain Identification

According to Churchill (1979), the study is divided into three phases. (1) Domain importance; (2) Instrument development; (3) Data collection and analysis. Based on this the author of the study has identified the articles related to UNESCO heritage site in Table 1. From, these studies authors have identified the indicators for the study. They are:

Environmental (ED); Economic (ECD); Social-Cultural (SD); Institutional (ID); Tourism Satisfaction (TS)
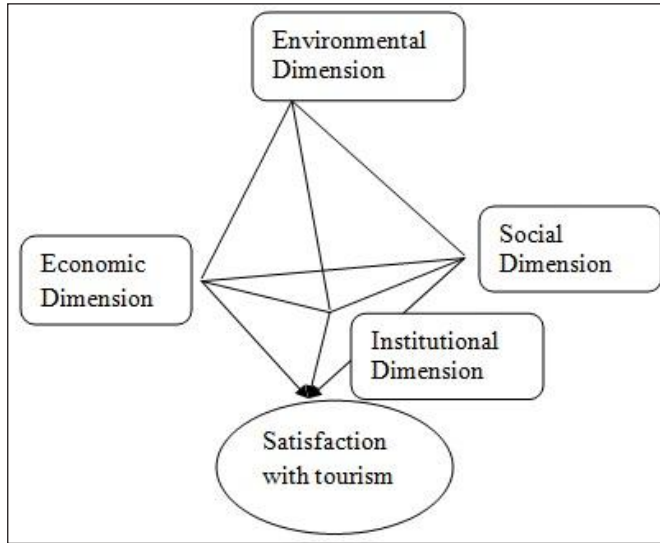
Fig. 2

Environmental Dimension

The Environmental dimension of prism of sustainability indicates to the natural resources. This dimension emphasizes on the reduction of pressure on the natural habitat and physical environment by taking into consideration all elements of bio-geological. It focuses to reduce the extinguishing of natural resources and to have the benefit of destination in well sustainable manner. Previous literature shows the study of environmental sustainability in context of responsible behavior (Lee et al., 2013), ecotourism (Kiss, 2004).

H1: Environmental dimension positively influences the residents' satisfaction.

Economic Dimension

The Economic sustainability refers to the human material welfare, employment and livelihoods and man-made capital (roads, railroads and buildings, etc.). This dimension emphasizes the local's monetary benefit by providing them employment. The economic system of a destination is stable and sustainable if there is no economic leakage and maximum benefit share by local residents (Cuccia et al., 2017).

H2: Economic dimension positively influences the residents' satisfaction.

Socio-Cultural Dimension

The third dimension of prism of sustainability deals with human capital such as awareness, knowledge, skills and behavior, and it incorporates basic human rights. Social vigor is considered very also significant which reflects that the society has ability and capability to take new initiatives by holding new rules and regulations. For the growth of sustainable development at a place, it is crucial to make participation of lowest levels of society (Ghai & Vivian, 2014). Through this, lowest level of society gets employment and their basic necessities are completed. The social dimension emphasizes on well-mannered individual's behavior towards the local community in order to make them comfortable with people visiting at the destination (Spangenberg, 2002).

H3: Socio-cultural dimension positively influences the residents' satisfaction.

Institutional Dimension

Institutions are considered as big organizations that are highly influential in a community, for instance, Government Organizations, Non-Government Organizations, Universities, and Hospitals. It is not only to develop an institution but also profitability implementation of sustainable development with social and financial backup. The institutional element of sustainable development is essential; linking strategy to the political will and active motivation needed to support implementation. In the Prism of Sustainability Theory, attention to institutional coordination and cooperation, as mentioned before, are both essential for the successful implementation of a sustainable development strategy. The institutional dimension focuses on robust the local's participation in the decision-making process (Liburd & Becken, 2017).

H4: Institutional dimension positively influences the residents' satisfaction.

Instrument Development

The items of the scale to evaluate the four dimensions of prism of sustainability and residents' satisfaction were taken from (Hussain et al., 2013). Further, to ensure the validity and reliability of the scale few items were added to the instrument leading to 34 items and subjected to face validity.

This is to ensure the reliability and clarity of the item. Later using, substantive validity (Sv), the item was evaluated by the subject experts to identified the items which are essential and non-essential for the study.

$$Sv = Ne\text{-} Nne/N$$

Where Ne – No. of respondents essential; Nne – No. of respondents non-essential; N – No. of respondents.

Using, the Sv ratio the authors have classified the essential and non-essential items. Items with value more than (≥0.5) were retained for the study. Based, on the validity the authors used 27 items for the study. An adapted measurement scale using the previous literature has been used to measure the constructs using a Five Point Likert scale ranging from 1(Extremely Disagree) to 5(Extremely Agree).

Data Collection

The target group of the study, which has been chosen as respondents were Indian travelers. The respondents were selected from three UNESCO world heritage sites of Delhi (Qutub Minar, Red Fort, and The Humayun Tomb). Total 300 questionnaires were distributed among the respondents. Some responses were discarded due to incomplete information. 220 responses were fully filled and were selected for final analyses, providing a response rate of 73.4% is shown in Table 2.

Table 2: Demographic Profile of Respondents

	Characteristics	**Frequency**	**Percentage**
Gender	Male	122	55.4%
	Female	98	44.6%
Age	Below 20	25	11.4%
	21-35	93	42.3%
	36-50	74	33.6%
	51-65	19	8.7%
	Above 65	9	4%
Employment Status	Employed	125	56.8%
	Self-Employed	40	18.3%
	Student	25	11.3%
	Others	30	13.6%

There were few general questions in section 1 were asked to local residents to know their satisfaction towards UNESCO world heritage sites in Delhi. 67.27% respondents agreed that they really enjoy the city's wealth of heritage and monuments whereas 32.27% respondents were not agreed. Regarding the attractiveness of these heritages, 76.81% respond that theses destinations are really beautiful and attractive, 23.18% found it okay and there were no respondents who respond that these heritages are not attractive and beautiful. Further, for the accessibility to these destinations, 71.36% found it have good transportation, 22.27% found that transportation should get improve and 6.36% found that transportation is not good. The next question was asked to know the local's perception about the tourist satisfaction who come to visit these destinations, 53.18% found them fully satisfied, 30% found them less satisfied and 19.09% found them not satisfied. The last question was asked local community about the economic benefit from tourism in which 66.36% were found agreed that they receive benefits, 25% respond that they receive benefits sometimes and 8.63% were not agreed about the benefits as in Table 3.

Table 3: The Local Residents' Satisfaction for World Heritage Sites

	Characteristics	**Frequency**	**Percentage**
Do you enjoy the city's wealth of heritage and monuments?	Yes No	149 71	67.72% 32.27%
How much you find the beauty attraction of Delhi heritage sites?	Very Attractive Okay Not Attractive	169 51 0	76.81% 23.18% 0%
Do you feel these heritage sites are easily accessible?	Good Transportation should get improve Transportation is not good	157 49 14	71.36% 22.27% 6.36%
Do you think tourists visiting these sites are satisfied?	Fully satisfied Less satisfied Not satisfied	112 66 42	53.18% 30% 19.09%
Does the local community attained proper benefit due to tourism?	Yes Sometimes No	146 55 19	66.36% 25% 8.63%

Data Analysis

The hypotheses of this study were analyzed using Smart PLS in version 3.0 (Ringle et al., 2005). The bootstrapping with 5000 re-samples were applied in PLS algorithms to get the appropriate value of Cronbach alpha, composite reliability, AVE. It also helps to achieve the significant value of proposed hypotheses. PLS analysis provides two models: the inner model is called the measurement model and outer model is called the structural model. Total of seven items were deleted while the measurement of model. Three items from economic dimensions i.e. EC3, EC5 and EC8, two items from socio-cultural dimension i.e. SCD2 and SCD7 and two items from residents' satisfaction i.e. TS1 and TS4 were deleted to get a model fit.

The Measurement Model

Convergent Validity: Convergent validity refers to an extent in which the items of construct strongly converge in their representation of the taken construct for measurement. Convergent validity is considered adequate when the Cronbach alpha is greater than 0.7, AVE is higher than 0.5 and composite reliability is higher than 0.7 (Fornell & Larcker, 1981; Chin, 1998b) shown in Table 4.

Table 4: Item Loadings, Composite Reliability, AVE, Cronbach Alpha Coefficients

Construct	Scale Item	Loadings	Composite Reliability		
Environmental (ED)	ED1	0.913	0.952		
	ED2	0.910			
	ED3	0.974			
Economic (ECD)	ECD1	0.819	0.955		
	ECD2	0.919			
	ECD4	0.888			
	ECD6	0.916			
	ECD7	0.947			
Social-Cultural (SD)	SCD1	0.793	0.970		
	SCD3	0.917			
	SCD4	0.977			
	SCD5	0.974			
	SCD6	0.981			

Construct	Scale Item	Loadings	Composite Reliability	AVE	Cronbach Alpha
Institutional (ID)	ID1	0.982	0.984	0.938	0.960
	ID2	0.967			
	ID3	0.944			
	ID4	0.982			
Tourism Satisfaction (TS)	TS2	0.905	0.944	0.849	0.911
	TS3	0.917			
	TS5	0.943			

Discriminant Validity: It is an extent in which the representation of indicators is different among the constructs. Fornell and Larcker (1981) state that for every individual construct, the value of square root of the AVE (which are shown in diagonal box) should be greater than its corresponding correlation coefficients. Table 4 has represented the values of AVE boldnumber and all values are above the threshold values which indicate adequate discriminant validity in Table 5.

Table 5: Discriminant Validity of Constructs

	ECD	ED	ID	SD	TS
ECD	0.899				
ED	0.421	0.932			
ID	0.769	0.452	0.969		
SD	0.568	0.437	0.628	0.931	
TS	0.757	0.475	0.825	0.664	0.922

The Structural Model

The statistical analysis and hypotheses testing were done by using PLS with 5000 bootstrapping. PLS don't provide the value of overall goodness of fit (GoF) indices. The diagnostic tool (Tenenhaus et al., 2005) was used to calculate GoF indices. Hoffmann and Birnbrich (2012) provide the cut-off values: GoFsmall _ 0.190; GoFmedium _0.33; and GoFlarge _ 0.670. The GoF value of model in this study was 0.803, which indicates a very good model fit as shown in Table 6.

Table 6: Goodness of Fit Indices

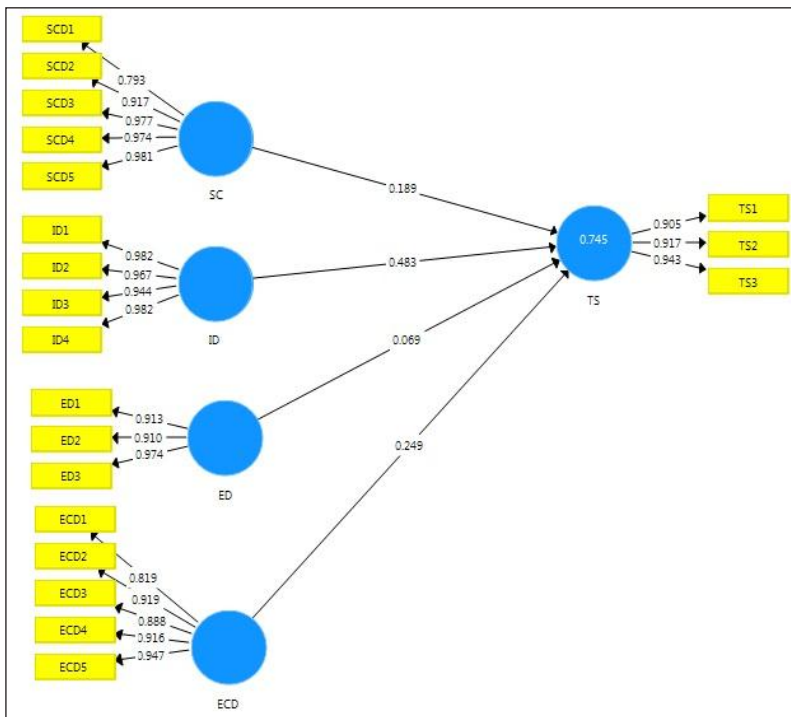| Constructs	AVE	R Square
Environmental Dimension	0.869	
Economic Dimension	0.808	
Socio-Cultural Dimension	0.867	
Institutional Dimension	0.938	
Tourism Satisfaction	0.849	
Average Score	0.867	
AVE *R2	0.645	0.745
(GOF =AVE*R2	**0.803**	

Fig. 3: The Structural Model

In structural model economic dimension ($\beta = 0.249, p < 0.05$), socio-cultural dimension ($\beta = 0.189, p < 0.05$) and institutional dimension ($\beta = 0.483, p < 0.05$) were found significant on tourists' satisfaction. Environmental dimension ($\beta = 0.069$, $p > 0.05$) was not found statistically significant in

predicting residents' satisfaction. The institutional dimension was founded as the strongest predictor of tourist satisfaction and had highest standardized coefficient.

In this study the R square for tourists' satisfaction was founded 0.745. For the validity of model, the endogenous latent variables as substantial, moderate or weak based on the R2 values of 0.67, 0.33 or 0.19, respectively (Chin et al., 2008). Accordingly, tourist satisfaction (R2-0.745) can be described as substantial.

Result and Discussion

This study has used the prism of sustainability model given by Spangenberg and Valentin (1999) and has examined the residents' satisfaction with tourism. This study aims to determine the impact of economic, environmental, social-cultural and institutional dimensions on residents' satisfaction. The proposed hypotheses H2, H3 and H4 were found statistically significant and H1 was found statistically insignificant. The fourth hypothesis H4 was found significant at 99.99% significance level was proved to be strongest predictor of residents' satisfaction in Table 7.

Table 7: Summary of Test Results for the Structured Model

Hypotheses	Path	Standardized Coefficient	P Value	Supported
H1	ED-TS	0.069	0.075	No
H2	ECD-TS	0.249	0.001	Yes
H3	SD-TS	0.189	0.002	Yes
H4	ID-TS	0.483	0.000	Yes

The first hypothesis of this study indicates that environmental dimension (path coefficient = 0.069, t statistics = 1.780, p = 0.075) is not a significant predictor of residents' satisfaction. The finding of this dimension is in contrast to previous researches (Cotrell et al., 2013; Hussain et al., 2015). It might be due to tourist's irresponsible behavior in these destinations and where tourists might throw all the disposable things. The government should put proper dustbins for the disposal of waste material and instructions should be written for the tourists.

The proposed H2 indicates that economic dimension of the prism of sustainability (path coefficient = 0.249, t statistics = 3.294, p = 0.001) was found a significant predictor of residents' satisfaction. Previous studies also found the dimensions of sustainability as statistically significant in various

contexts including residents' satisfaction, tourists' satisfaction, tour operator satisfaction (Hussain et al., 2015; Cottrell et al., 2013; Shen & Cottrell, 2008).

The proposed H3 indicates that socio-cultural dimension (path coefficient = 0.189, t statistics = 3.103, p = 0.002) was also a significant predictor of residents' satisfaction. WTO (2004) states that this dimension is most integral part of sustainability as it provides anticipation to local in decision making related to economic benefits, ecological viewpoint, cultural values, etc. This study has confirmed that local community near to world heritage sites in Delhi are involved in decision making by the other stakeholders.

The fourth hypothesis H4 of this study indicates that the institutional dimension (path coefficient = 0.483, t statistics = 5.581, p = 0.000) was found a strongest predictor of residents' satisfaction. The results of this dimension also found consistent with previous studies (Lopez-Guzzman, 2018; Hussain et al., 2015; Cottrell et al., 2013; Huayhuaca et al., 2010).

Conclusion and Recommendation

Tourism that has a deep or rich heritage background is becoming an instrument for the development of regional area from past few decades. The WHSs are significantly linked with tourism and fascinated tourists to visit these destinations. Although it has posed many threats and challenges for the conservation of heritage sites and as well as massive tourist inflow with irresponsible behavior causes local communities' dissatisfaction, and they become antagonistic towards tourists.

With the rapid growth of tourism industry, sustainability and sustainable development are playing an imperative role for all the stakeholders for instance tour operators, local residents, and tourists (Brida et al., 2010). For the sustainable development of a destination, it is important to consider local community satisfaction. In case of heritage destinations, it is important to bring everything in their notice as previous researches have mainly focused on tourists' satisfaction and tour operators satisfaction (Hussain et al., 2015; Cotrell et al., 2013; Cottrell & Raadik, 2008; Curto, 2006) but a limited number of studies have studied on residents' satisfaction by taking the model of prism of sustainability. Data were collected from 220 Indian tourists from three UNESCO world heritage sites of Delhi. Further, data was analyzed in SEM by using partial least squares (PLS). The results of this study indicated that three dimensions (economic, socio-cultural and institutional dimensions) of sustainability were found significant and one dimension (environmental dimension) was found insignificant in predicting the residents' satisfaction.

Department of Hotel Management, BIT-Mesra, Ranchi-835215

This study has analyzed the perception of local community by using prism of sustainability framework which further helps the tourism operators and government to build sustainable indicators for these destinations. This approach can also provide help in modeling the residents' perception in context of sustainability and making policies decisions by including all dimensions (Butler, 1999). For the sustainable development of destination, local residents' satisfaction is considered as most integral part (Brida et al., 2010).

Managerial Implications

In tourism industry, residents' satisfaction is considered a prominent part of the successful development of heritage sustainability. To ensure the residents' satisfaction, these heritage sites should be a proper plan monitor by using the indicators of sustainability. This study provides shreds of empirical evidence that the satisfaction of local community is influenced by economic, socio-cultural and environmental dimensions by the UNESCO world heritage tourism and not influenced by environmental dimension. The results of this study indicate that managers and government need to develop some standards and indicators by taking dimensions of sustainability. There is a need to put more consideration on economic dimension so that benefits gets transfer to local community and economic leakages get reduced. As the environmental dimension in this study was found insignificant so managers should take some necessary actions and set some standards to maintain the environmental sustainability of these UNESCO world heritage sites.

Limitations and Future Scope

The objective of this study was to evaluate the influence of sustainability dimensions on residents' satisfaction. In this study, only three dimensions i.e. economic, socio-cultural and institutional were proved to be significant predictor whereas environmental was not found significant. Some studies found two or three or four dimensions as significant so future studies can take an attempt to why the influence of four dimensions varies across the countries. This study hadn't taken any moderator so further study can take moderator such as gender, age, personal cognization. The sample drawn for this study was from Indian travelers so its results can't be generalized in other countries.

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