

# UNFOLDING KEY COMPONENTS OF TOURISM DESTINATION COMPETITIVENESS BY USING STRUCTURAL EQUATION MODELING

Nitin Saxena\*  
Surendra Tiwari\*\*

**PURPOSE**  
*THIS research study seeks to investigate the determinants of tourism destination brands competitiveness in order to develop a structural model to establish relationship between explored determinants and competitiveness of tourism destination brands exist in Uttar Pradesh, India.*

**Design/Methodology/Approach:** *This study referred Ritchie and Crouch's model of tourism destination competitiveness. A structural model has been developed by using 21 variables of this model. Exploratory factor analysis followed by structural equation modeling along with Cronbach's alpha as the reliability coefficient and various measures of model validity have been employed with the help of IBM SPSS (var. 21.0) and AMOS. . This study used a sample of 286 foreigner tourists who were visiting to tourism destinations of Mathura and Ayodhya, between 1<sup>st</sup> July to 20<sup>th</sup> August, 2019.*

**Findings:** *The results of the exploratory factor analysis resulted into the reduction of variables into selective number of factors. The reliability of each factor composition was confirmed by using Cronbach's alpha. The structural model has been developed by using the factors obtained from exploratory factor analysis and it is represented by using path diagram of model. CMIN measure and baseline comparison measures validate the structural model.*

**Research Limitations/Implications:** *Further research is required to confirm the application of model developed in this research in order to provide worthy information to improve competitive advantage of each of the tourism destination exist across Uttar Pradesh. A multiple regression based model can also be developed to show the relative contribution of the determinants (factors) of the tourism destination brand competitiveness.*

**Originality Value:** *The value of this research study is that it contributes to the literature review and it shall provide key insights about what determine the competitiveness of tourism destination brands and these insights can be used to promote the tourism destination as a brand.*

**Key Words:** *Tourism Destination Branding, Structural Equation Model, Destination Competitiveness, Tourism Marketing.*

## Introduction

India is full of tourism destinations. These destinations include religious, heritage, wildlife, historic monuments, wonder of world destinations. For more than two decade central government along with

\* Assistant Professor, Institute of Technology & Science, Ghaziabad, Uttar Pradesh, India.

\*\* Associate Professor, Institute of Technology & Science, Ghaziabad, Uttar Pradesh, India.

state governments has been trying to promote India as “Incredible India” from the perspective of tourism. India is a developing country and tourism is one such industry that not only contributes to the GDP (Gross Domestic Product) but also in the generation of employment to unskilled work force to skilled and professional work force. Within India tourists tends to visit as many destinations as they can but tourists have to tradeoff during the selection of tourism destinations. The destination that preferred over the other supposed to be more competitive. Tourism destination competitiveness has been defined in many ways for example some destinations are highly price competitive as the cost of tourism related activities is relatively economic (India Tourism Statistics 2017). Tourism destination competitiveness has been defined with the help of diverse indicators by the researchers at different point in time. Ranges of conceptual models have been proposed to explain determinants of tourism destination competitiveness. This research study aims to explore the determinants of tourism destination competitiveness with specific reference to the city of Ayodhya and Mathura in Uttar Pradesh, India (Ministry of Tourism, Annual report, 2017-18). Furthermore, this study also attempts to develop a structural model for the evaluation of tourism destination competitiveness from the perspective of foreign tourists who visited the mentioned cities.

## **Literature Review**

### **Tourism Destination and Competitiveness**

The physical space that includes tourism products including support services, tourists’ attractions and tourism resources with well defined geographically defined boundaries is termed as tourism destination (Caldwell, 2004). Tourism destinations can be country, city, or an island. Administrative and politically defined border lines in addition to geographic boundaries helps to define the location of the tourism destination on the global map. Competitiveness is the essentially required character of competing entities such as products, services, professionals, companies, industries and countries and an extension to this list is tourism destinations. Degree of competitiveness affects the potential to sustain and also decide the future of competing entities (Cretu, 2011). Competitiveness is a measure of superiority to compete. Competitiveness of a tourism destination can be discussed by using region specific factors or by using country specific factors. Different countries defined measure of tourism destination competitiveness with the help of diverse indicators. The selection of the indicators by a country is influenced by the economic condition of the country and also by the overall perception of the country at global level.

### **Tourism Destination Competitiveness**

Tourism destination competitiveness is the measure of destination’s potential to maintain its strong positive perception among tourists against all competing tourism destinations. As per academic literature the tourism destinations compete on six ‘A’s (WEF, 2008). These are ‘Attraction’ such as monuments, specific event, religious place, and heritage etc., ‘Amenities’ such as hospitality, and food, ‘Accessibility’ like transport infrastructure, transport options and related support, ‘Activities’ such as recreational activities for tourist, ‘Ancillary support’ such as banking, health care and telecom etc., ‘Available packages’ organize by professional tour operators or by authorized government agencies. Each of the ‘A’ described here has a potential to confer greater degree of competitiveness to a specific tourism destination. Most of the authors and researchers has defined tourism destination competitiveness with the help of one or more of the six ‘A’s as described in aforementioned details.

One of the key objectives to measure tourism destination competitiveness is to understand the ability of the destination to contribute in increasing the real income of its resident and also in uplifting their standard of life (Chaudhary & Manjula, 2011). In some of the research studies competitiveness of a tourism destination has been linked to social, cultural, legal, technological and political indicators. It has been observed in past researches that the tourism destinations compete against each other on the basis of available attractions, infrastructure and safety of tourist. In some of the researches certain indicators that have lost their role in the determination of

destination competitiveness has been pointed out. Such indicators include assurance for quality tourist services, promise of hygienic accommodations and price effective tourism packages (Sharma, 2014). Role of effective marketing efforts and strategically designed tourism policy are among the key differentiators in making destinations of a location more competitive. The literature on tourism destination has been more around conceptual discussion and empirical studies are comparatively less available specifically in Indian context on the topic of tourism destination competitiveness.

One of the early model of destination competitiveness was a conceptual model developed by De Keyser and Vanhove. It was proposed in 1994 and this model explained the role of 'tourism policy', 'supply factor', 'demand factor', 'macroeconomic factor' and 'transport factor' in the overall competitiveness of tourism destination (Elizabeth & Barber, 2016). In year 2000 a model was proposed by Hassan and it explain four determinants of tourism destination competitiveness. This model composed of four factors and the key differentiating factor of this model was the factor named as 'Environmental concern'. The other factors were 'Comparative advantage of the tourism destination', 'Industry structure' and 'Demand factors' (Hassan, 2000).

Ritchie and Crouch's model proposed in 2003 is among the early models related to destination competitiveness (Ritchie & Crouch, 2001). According to their model destination competitiveness is affected by the comparative advantage of the destination. The comparative advantage could be due to natural endowments or in some cases it has been found that comparative advantages could be obtained by technology led human efforts. Competitive advantage that brought out due to destination's ability to use its comparative advantage also contributes to the competitiveness of the tourism destination. The foundation of Ritchie and Crouch's model is inspired from the theory of absolute advantage, theory of comparative advantage and the Porter's diamond model of competitive advantages. The model identified 36 variables related to the competitiveness of tourism destination and these were classified into six factors. These six factors include 'Planning & Development', 'Destination Related Policy', 'Destination management', 'Core resources & attractors', 'Qualifiers & Amplifiers' and 'supporting factors & resources'. However this model is highly comprehensive yet it has been criticized for not addressing the demand conditions and the role of globalization and degree of urbanization on the level of competitiveness of tourism destination. An integrated model for tourism destination competitiveness was proposed in 2003 by Dwyer and Kim and their model has been among the few dominant model use for the detailing of the competitiveness of the tourism destination (Kim, 1998). Four important constructs were considered in this model. These were 'Demand conditions', 'Core resources', 'Situational conditions' and 'Destination management'. One of the key differentiating point of this model was that it attempted to distinguished between infrastructure for general purpose and infrastructure for exclusively developed to promote tourism at the destination. 'WEF travel and tourism has developed a competitiveness index (WEF, 2008).

### **Background of the Study**

This study was carried out at two most prominent and famous tourism destinations situated in the state of Uttar Pradesh, India. These were city of Mathura and the city of Ayodhya. India is much known for its religious and heritage destinations that attract tourist from across globe. Literature review indicated that few research studies have been in the context of tourism destination competitiveness (India Tourism Statistics 2017). Uttar Pradesh has been the third most visited tourist destination in India by the foreigner tourist in 2016 and within the state of Uttar Pradesh the second most visited place was Ayodhya and eight most visited places was Mathura. Despite so attractive statistics related to these two places, there have been very limited studies about these two places. In a recent policy level attempt the state government started to develop various tourism circuits to promote tourism at selective destinations. One of the tourism expansion efforts is the development of 'heritage arch' and this arch includes the city of Ayodhya and the city of Mathura (Sharma, 2014). This has motivated to examine the tourism destination competitiveness of the Ayodhya and Mathura.

## Research Methodology

This research study is based on descriptive research design. The population of this study consisted of foreigner tourist visiting to Ayodhya and Mathura. A sample of 286 foreigner tourist was obtained by using non-probability based convenience sampling technique. This sampling technique was selected as it was less expensive as well as less time consuming. Out of 286 sample size 150 foreigner tourists were surveyed at Mathura and 136 foreigner tourists were surveyed at Ayodhya. A structured close ended questionnaire was used to collect data. The questions related to tourism destination competitiveness included the variables obtained from the Ritchie and Crouch's model. Tourists were asked to share their opinion regarding what they feel about the competitiveness of the tourism destination in the form of ratings on a five point Likert rating scale. This scale ranges from highly competitive to not at all competitive. Exploratory factor analysis was used to identify important factors and these factors subsequently used to construct a structure model. The structure model was further validated by using various measures. Basic sample profile description was summarized to briefly describe sample related demographic statistics. SPSS and AMOS were used for the data analysis and model development.

## Data Collection

Data collection was completed in three week time. Data collection was done with the help of self-administered questionnaire. The survey at Ayodhya was conducted during July month while data collection at Mathura was done in the month of August. The tourists were contacted during their visit the destination attractions. Tourists were keep coming to visitors site throughout the day and to have better representation so the data collection was also run through out of the day.

## Data Analysis

Out of 286 foreigner tourists survey participants (Table No. 1), 62.9 percent were male and 37.1 percent were female. The age of these tourists found to be in a mix. 33.6 percent tourists were of the age group of 26 to 35 years. Almost similar percentages of tourists (approximately 19%) were from the age group of 18 to 25 as well as 36 to 45. Tourists belonged to 55 years of age or above were 10.5 percent. 52.4 percent of tourists were surveyed from Mathura while 47.6 percent tourists were surveyed from the city of Ayodhya. The foreigner tourists were coming from different countries to visit tourism destination of city of Mathura and Ayodhya. Majority of the foreigner tourists were found to be coming from the neighboring countries such as Sri Lanka (3.5%), Nepal (14%), Bangladesh (19.2%) and Bhutan (16.4%). However significant numbers of tourists were also coming from the countries such as USA (12.2%), Japan (18.9%), UK (5.2%) and Australia (10.5%)

**Table No. 1: Frequency Distribution of Demographic Variables**

| Variable          | Category   | Frequency | Percent |
|-------------------|------------|-----------|---------|
| Tourist's Country | USA        | 35        | 12.2    |
|                   | Japan      | 54        | 18.9    |
|                   | Nepal      | 40        | 14.0    |
|                   | Srilanka   | 10        | 3.5     |
|                   | Bangladesh | 55        | 19.2    |
|                   | Bhutan     | 47        | 16.4    |
|                   | UK         | 15        | 5.2     |
|                   | Australia  | 30        | 10.5    |
|                   | Total      | 286       | 100.0   |

| Variable            | Category | Frequency | Percent |
|---------------------|----------|-----------|---------|
| Age                 | 18-25    | 55        | 19.2    |
|                     | 26-35    | 96        | 33.6    |
|                     | 36-45    | 57        | 19.9    |
|                     | 46-55    | 48        | 16.8    |
|                     | Above 55 | 30        | 10.5    |
|                     | Total    | 286       | 100.0   |
| Gender              | Male     | 180       | 62.9    |
|                     | Female   | 106       | 37.1    |
|                     | Total    | 286       | 100.0   |
| Tourism Destination | Mathura  | 150       | 52.4    |
|                     | Ayodhya  | 136       | 47.6    |
|                     | Total    | 286       | 100.0   |

### Reliability Testing of Scale

Total 21 variables were selected from Ritchie and Crouch’s model of tourism destination competitiveness. Foreigner tourists were asked to rate the destination related variables to evaluate the competitiveness of the tourism destination by using five point Likert scale. The reliability of scale was evaluated by using Cronbach’s alpha estimation. The results (Table No. 2) (0.802) indicated the reliability of scale, (Cross Validated, 2017).

**Table No. 2: Reliability Statistics**

| Cronbach’s Alpha | No. of Items |
|------------------|--------------|
| 0.802            | 21           |

### Results of Exploratory Factor Analysis

Exploratory factor analysis with varimax rotation was used to determine the dimensions of the destination competitiveness. The factors that had Eigen value equals to one or more than one were considered as significant factors. Following Table No. 3 shows the structure of each identified factor along with respected factor loading. Factor analysis resulted in four dimensions (or factors) of destination competitiveness and these were named as “Destination Environment”, “Destination Attractiveness”, “Tourist Safety” and “Tourism Marketing”. Overall reliability of each factor has been calculated and has been mentioned in the following table against each factor.

**Table No. 3: Factor Analysis and Reliability Statistics**

| Factor                           | Variable                | Factor Loading | Cronbach’s Alpha |
|----------------------------------|-------------------------|----------------|------------------|
| Factor-1 Destination Environment | Facilitation            | 0.747          | 0.796            |
|                                  | Accessibility           | 0.667          |                  |
|                                  | Infrastructure          | 0.659          |                  |
|                                  | Tourist Management      | 0.598          |                  |
|                                  | Monuments Structure     | 0.588          |                  |
|                                  | Destination Development | 0.562          |                  |
|                                  | Location of Destination | 0.522          |                  |

| Factor                              | Variable                      | Factor Loading | Cronbach's Alpha |
|-------------------------------------|-------------------------------|----------------|------------------|
| Factor-2 Destination Attractiveness | Climate Conditions            | 0.653          | 0.813            |
|                                     | Cultural Aspect               | 0.650          |                  |
|                                     | Special Events                | 0.630          |                  |
|                                     | Cost Touring                  | 0.599          |                  |
|                                     | Hospitality Tourist           | 0.581          |                  |
|                                     | Entertainment Level           | 0.580          |                  |
|                                     | Mix of Activities for Tourist | 0.500          |                  |
| Factor-3 Tourist Safety             | Crisis Management             | 0.838          | 0.836            |
|                                     | Safety                        | 0.772          |                  |
|                                     | Service Quality               | 0.735          |                  |
| Factor-4 Tourism Marketing          | Awareness                     | 0.697          | 0.62             |
|                                     | Marketing Efforts             | 0.692          |                  |
|                                     | Destination as Brand          | 0.599          |                  |
|                                     | Information search            | 0.438          |                  |

### Structural Equation Model of Tourism Destination Competitiveness

AMOS has been used to draw path model. Selected 21 variables were reduced to four factors after exploratory factor analysis. Factor loadings of the variable under each factor ranged from 0.747 to 0.438. All 21 variables except two (destination as brand and information search) had the factor loading equals to or more than 0.60. This indicate reasonable discriminant validity (Kline, 2005). The factor loadings of “destination as brand” variable was 0.599, which is close to 0.60 and because Cronbach’s alpha for the factor-4<sup>th</sup> that contain “Information search” variable (factor loading 0.438) was 0.62 which means factor in totality is reliable so both of these variable were not excluded from further analysis(commfaculty, 2014). Structural Equation Modeling analysis was conducted to examine the model fit. The results of model fit summary include the measure of CMIN, Baseline comparison measure, Root Mean Square Error of Approximation measure. The analysis estimation obtained in output as model fit summary are used to evaluate fitness of model. CMIN/DF is a test measure that evaluates the fit of model. The value of CMIN/DF less than three indicates good fit ([www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov)).

Notations: DATT\_1(Climate Condition), TMKT\_1(Awareness), TMKT\_4 (Information Search), DATT\_6 (Entertainment Level), DATT\_3(Special Event), DENVIO\_1(Facilitation), DENVIO\_6(Destination Development), TSAF\_1(Crisis Management), TMKT\_2 (Marketing Efforts), DENVIO\_3 (Infrastructure), TSAF\_2 (Safety), DATT\_5(Hospitality Tourist), DENVIO\_5 (Monuments),DENVIO\_4(Tourist Management ), DENVIO\_7 (Location of Destination), DATT\_7 (Mix activities for tourist), TSAF\_3 (Service Quality), DENVIO\_2 (Accessibility), TMKT\_3 (Destination as Brand), DATT\_4 (Cost of Touring), DATT\_2 (Cultural Aspect)

**Table No. 4: Model Fit Summary**

| Model         | CMIN/DF | NFI   | IFI   | CFI   | RMSEA |
|---------------|---------|-------|-------|-------|-------|
| Default Model | 2.376   | 0.820 | 0.887 | 0.886 | 0.069 |

The estimated value of baseline comparison measures includes the measure such as NFI (0.820), IFI(0.887) and CFI (0.886). All the values are close to 0.90 and as per suggested standard the values of

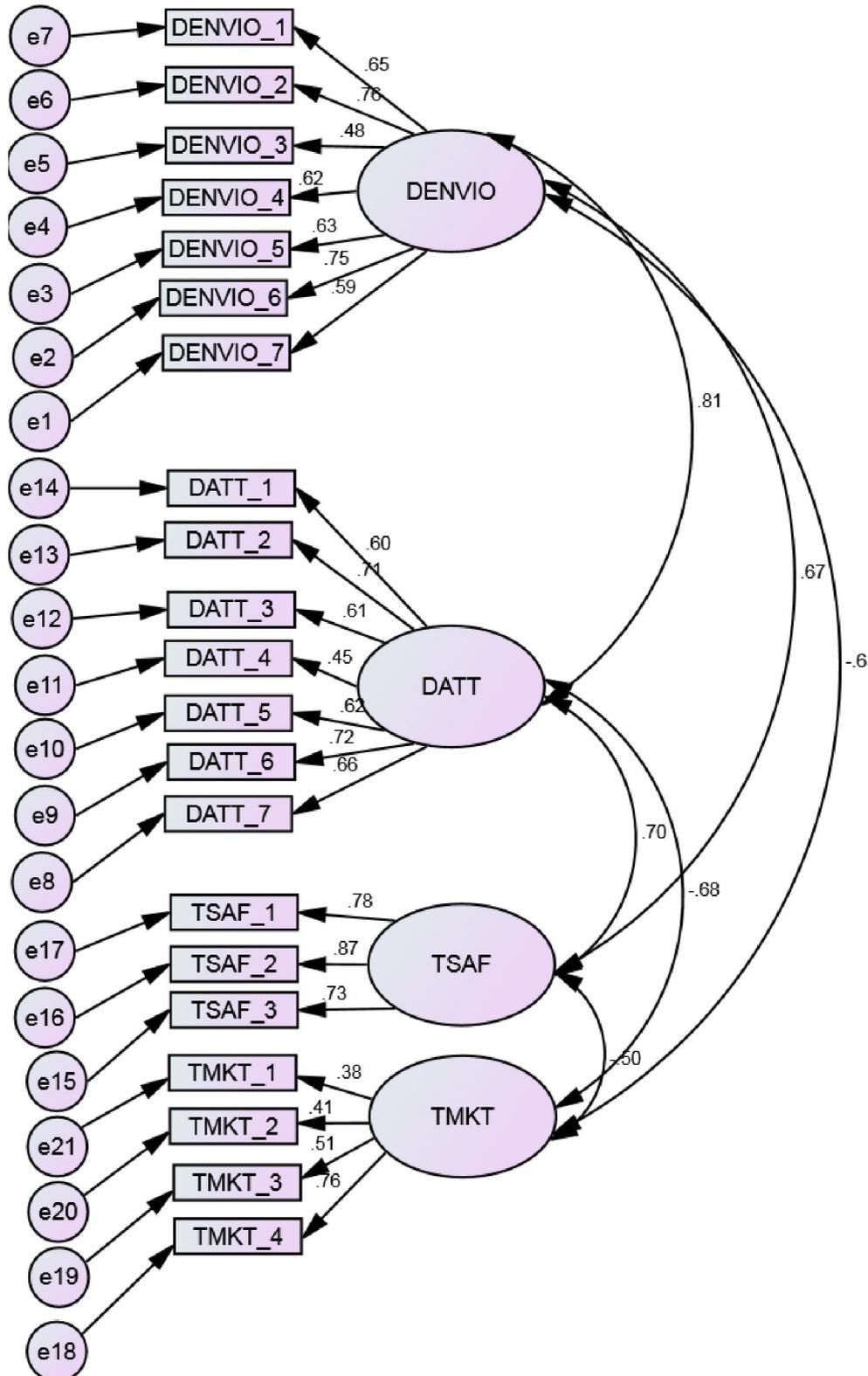


Figure No. 1: Path Model

baseline comparison index should be close to 0.9 for good fit of model(www.ncbi.nlm.nih.gov). This indicates a moderate fit of the model. Root Mean Square Error of Approximation (RMSEA) values are used to evaluate the overall model fit(Cornell, 2015). RMSEA measures evaluate how well model fitness is present to different part of model(Shodhganga, 2015). The estimated value of RMSEA is 0.069. As per accepted standard the value close to seven indicate marginally mediocre fir of model.

## Conclusion

This study has identified four factors that can contribute to make the tourism destination more competitive. This study has reviewed concept of destination competitiveness from the view point of foreigner tourists. The results shows that destination competitiveness is a composite concept and different variable affect degree of competitiveness to varied level so it is required to understand the relative importance of selected variables. Tourism marketing alone could not significantly work in the development of competitiveness. Structural equation model has been developed and its fitness has been evaluated. This model could have indicative value to show how more comprehensive model to evaluate competitiveness can be developed. The results show that the identified factors could provide insights to the authorities and people working toward making Indian destinations more competitive.

## References

- Abam, E. (2016). Marketing a potential tourism destination-a case study of Nsanakang in Eyumojock subdivision. *Journal of Tourism and Hospitality*.
- Banerjee, A., & Chaudhary, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 60-65.
- Berry, G. (2015). *Research Methodology*. New Delhi: Tata McGraw.
- Caldwell, N. (2004). The differences between branding a country, a region and a city: Applying the Brand Box Model. *Journal of Tourism and Travel*.
- Chaudhary, & Manjula, S. B. (2011). Travel and Tourism Industry in India: Looking East. *Indian Institute of Tourism and Travel Management*.
- Commfaculty. (2014). *Confirmatory Factor Analysis through the Amos Program*. Retrieved from <http://commfaculty.fullerton.edu>: [http://commfaculty.fullerton.edu/jreinar/stat\\_ch16.htm](http://commfaculty.fullerton.edu/jreinar/stat_ch16.htm), Accessed on July 24, 2018.
- Cornell. (2015). *Fit Statistics commonly reported for CFA and SEM*. Retrieved from [www.cscu.cornell.edu](http://www.cscu.cornell.edu): [https://www.cscu.cornell.edu/news/Handouts/SEM\\_fit.pdf](https://www.cscu.cornell.edu/news/Handouts/SEM_fit.pdf), Accessed on October 28, 2019.
- Cretu. (2011). Destination image and destination branding in transition countries. University of York.
- Cross Validated. (2017). Retrieved July 24, 2018, from <https://stats.stackexchange.com>: <https://stats.stackexchange.com/questions/286099/difference-between-multiple-regression-with-categorical-independent-variables-ve>, Accessed on July 24, 2018.
- Elizabeth, & Barber, H. (2016). *Travel and Tourism for the Curious: Why Study Travel and Tourism Management?* The Curious Academic Publishing.
- Hassan. (2000). Determinants of market competitiveness in an environmentally sustainable tourism industry. *Journal of Travel Research*, 239-45.
- India Tourism Statistics 2017. (n.d.). Retrieved from [tourism.gov.in](http://tourism.gov.in): <http://tourism.gov.in/sites/default/files/Other/INDIA%20TOURISM%20STATISTICS%202017.pdf>, Accessed on June 22, 2019.
- Indian population live. (2018, July 3). Retrieved from <https://www.worldometers.info/world-population/india-population/>, Accessed on July 4, 2018.
- Kim. (1998). Perceived attractiveness of Korean destinations. *Annals of Tourism Research*, 340-61.
- Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling*. New York: Guilford Press.
- Ministry of Tourism, Annual report. (2017-18). Retrieved from <http://tourism.gov.in>: <http://tourism.gov.in/annual-report-2017-18>, Accessed on February 17, 2018.
- Ritchie, & Crouch. (2001). The competitive destination: A sustainability perspective . *Tourism Management*, 1-7.

- Sharma, S. &. (2014). Tourist Perception of Image of The Destination - A Case Study of Indian Tourism. *International Journal of Scientific Research*, 336.
- Shodhganga. (2015). *Data Analysis : Model Fit Analysis*. Retrieved from <http://shodhganga.inflibnet.ac.in>: <http://shodhganga.inflibnet.ac.in/bitstream/10603/73032/14/13.%20chapter%206.pdf>, Accessed on June 29, 2018.
- Taber, K. S. (2018). *The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education*. Retrieved from [www.link.springer.com](http://www.link.springer.com): <https://link.springer.com/article/10.1007/s11165-016-9602-2#Fig1>, Accessed on October 19, 2019.
- WEF. (2008). Travel and Tourism competitiveness report. *WE Forum*, 2-20.
- Woodside A., L., & S. (1989). A general model of traveller destination choice. *Journal of Travel Research* , 8-14.
- www.ncbi.nlm.nih.gov. (n.d.). *Model fit summary*. Retrieved from [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov), Accessed on October 24, 2020.