

# Prediction Of Foreign Tourists Travelling In India: An Empirical Study

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## Abstract

India is a big country, it is having many cultures, many religions, many historical places and thousands of temples and mosques despite of that India is not attracting good number of foreign tourists as compared to many small countries in the world. After starting incredible India campaign the foreign tourist number is increased significantly.

Each part of India is worth exploring and worth enjoying whether they are east India or west India south India or north India. You will defiantly find unique charm and favourable ambiance in each part of the country. During your travel you will have a brilliant opportunity to observe rich culture and civilization of the God's own country - Kerala, and from the sacred Ganges to the sands of the Thar Desert, the country's boundaries encompass incomparable variety.

Hence this paper highlights each and every aspects of foreign tourism with respect to its impact on the geographic dimension/ variables related to it and other parameters to test the result for the same.

**Key Words: Foreign Tourism, Geographic, Culture.**

## Introduction about Indian Tourism:

India is famous as the land of stunning beauty and overall history that can be seen in its culture, tradition, and geography. There are lots of tourism opportunities in this country as like: Wildlife, hill station, beach, ancient Ayurveda, backwater, Adventure, Cultural, monument, village pilgrimage, monsoon, etc are predominant tourism options available in this country. India's exhilarating beauty has been attracted to visitor since long years.

Kerala, it is most catchy attractions are Golden beaches, Mesmerizing Temples, stunning Backwaters. You also have opportunity for excursion trip to neat that State travel. India is also basically known for wildlife tourism. The land of India is dotted with several tourist attractions and able to satisfy all type of tourists, whether they are nature lovers, heritage lovers, beach lovers, adventure and sports lovers or culture seeker.

You can also explore the beauty of Himalaya through India tour and It will takes you to the north-east India, where the great Himalaya standing tall. North India Tourism is the journey of India. Become the part of North India Tourism and feel the Indian life through North India Tourism. Your tour to India will enable you to explore its vast dimension. A wild life tour to Indian jungle, reach the heights of unlimited excitement, when experience the moments of wilderness with the crawling tigers, trumpeting elephants and the hissing snakes. Here is world famous Ranthambore National Park where travellers have golden opportunity to wildlife tourism and seeing the sensational activities of wild animals in their natural surroundings.

## **Geography and Climate:**

Because of India's size, its climate depends not only on the time of year, but also the location. In general, temperatures tend to be cooler in the north, especially between September and March. The south is coolest between November to January. In June, winds and warm surface currents begin to move northwards and westwards, heading out of the Indian Ocean and into the Arabian Gulf. This creates a phenomenon known as the south-west monsoon, and it brings heavy rains to the west coast. Between October and December, a similar climatic pattern called the north-east monsoon appears in the Bay of Bengal, bringing rains to the east coast. In addition to the two monsoons, there are two other seasons, spring and autumn.

Though the word "monsoon" often brings to mind images of torrential floods and landslides, the monsoon seasons are not bad times to come to India. Though it rains nearly every day, the downpour tends to come and go quickly, leaving behind a clean, glistening landscape.

## **Culture and People:**

With nearly 1.2 billion citizens, India is the second most populous nation in the world. It is impossible to speak of any one Indian culture, although there are deep cultural continuities that tie its people together. English is the major language of trade and politics, but there are fourteen official languages in all. There are twenty-four languages that are spoken by a million people or more, and countless other dialects. India has seven major religions and many minor ones, six main ethnic groups, and countless holidays.

Religion is central to Indian culture, and its practice can be seen in virtually every aspect of life in the country. Hinduism is the dominant faith of India, serving about 80 percent of the population. Ten percent worship Islam, and 5 percent are Sikhs and Christians; the rest (a good 45 million) are Buddhists, Jains, Bahai, and more.

## **About Foreign Tourist Visitors:**

Foreign tourists spend more time and money in India than its competing destinations like Thailand, Malaysia, Indonesia and Singapore. Forex earnings of other Asian destinations (barring China) from tourists are lower than that of India even as India has been able to attract fewer numbers of tourists, according to tourism ministry data.

They have always promoted the country as a destination of long stay. Foreign tourists, on an average, stay for 14-17 days in India as against 5-7 days in neighbouring countries," a senior official in the tourism ministry said. India attracts the highest number of tourists from countries like the US, the UK, Bangladesh, Canada and France.

In 2017, around 5 million tourists arrived in India and spent nearly \$11 billion, while Malaysia and Singapore could attract 20.2 million and 10.2 million foreigners respectively. Their foreign exchange earnings were \$10.1 billion and \$9.16 billion respectively, says an official data.

## **Impact of Tourism in India:**

Tourism is a significant sector of the Indian economy and contributes significantly to the country's gross domestic product (GDP) and foreign exchange earnings (FEE). The Indian tourism sector is also linked with important sectors such as transportation, infrastructure, and handicraft, which further helps in the growth and development of the country.

The Ministry of Tourism has made various efforts to expand the tourism infrastructure at various destinations in India. These efforts are a judicious blend of traditions, legacy, religion and eco-tourism projects that intend to offer the tourists a holistic experience.

India currently holds the 12th position in Asia and 68th position in the list of overall in the list of the world's most attractive tourist destinations, as per the Travel and Tourism Competitiveness Report 2011 by the World Economic Forum (WEF).

### **Current Scenario:**

The ministry of tourism is responsible for its significant growth in the last couple of years. They campaigned for 'Incredible India' which gave a whole new angle to the tourism of India. The campaign created a vibrant image of India in the mind of tourists and created a buzz among tourists. With tourism other small scale industries such as handicrafts, horticulture, constructions and agriculture have grown.

Indian tourism is vibrant and has the capacity to put India on the maps of being a global destination. It is the most flourishing and thriving industries in the world today and the future is also far from being bleak.

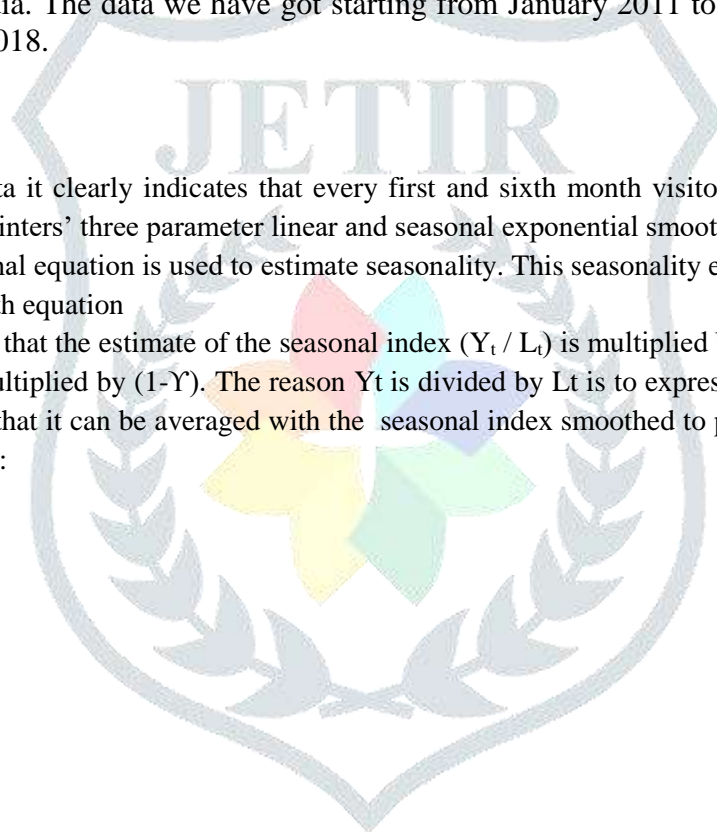
### **Data Collection:**

The data used in this paper was collect from the secondary source. The study is done to analyse the growth of foreign tourists in India. The data we have got starting from January 2011 to June 2018 and we have to forecast till December 2018.

### **Methodology:**

Once you examine the data it clearly indicates that every first and sixth month visitors are increasing. A seasonal pattern appears to exist. Winters' three parameter linear and seasonal exponential smoothing model is an extension of Holt's model. One additional equation is used to estimate seasonality. This seasonality estimate is given as a seasonal index, and it calculated with equation

4.19. Equation 4.19 shows that the estimate of the seasonal index ( $Y_t / L_t$ ) is multiplied by  $Y$  and the added to the old seasonal estimate ( $S_{t-s}$ ), multiplied by  $(1-Y)$ . The reason  $Y_t$  is divided by  $L_t$  is to express the value as an index rather than in absolute terms, so that it can be averaged with the seasonal index smoothed to period  $t-s$ . The four equations used in Winters' model are:



## 1. The exponential smoothed series:

$$L_t = \alpha \frac{Y_t}{S_{t-s}} + (1 - \alpha)(L_{t-1} + T_{t-1}) \quad (4.17)$$

## 2. The trend estimate:

$$T_t = \beta(L_t - L_{t-1}) + (1 - \beta)T_{t-1} \quad (4.18)$$

## 3. The seasonality estimate:

$$S_t = \gamma \frac{Y_t}{L_t} + (1 - \gamma)S_{t-s} \quad (4.19)$$

$L_t$

4. Forecast  $p$  period into the future:

$$\hat{Y}_{t+p} = (L_t + pT_t)S_{t-s+p} \quad (4.20)$$

Where

$L_t$  = new smoothed value or current level estimate

$\alpha$  = smoothing constant for the level ( $0 \leq \alpha \leq 1$ )

$Y_t$  = new observation or actual value in period  $t$

$\beta$  = smoothing constant for trend estimate

( $0 \leq \beta \leq 1$ )  $T_t$  = trend estimate

$\gamma$  = smoothing constant for seasonality estimate  
( $0 \leq \gamma \leq 1$ )

$S_t$  = seasonal estimate

$p$  = periods to be forecast into the future  $s$  =  
length of seasonality

$\hat{Y}$  = forecast for  $p$  periods into the future  
 $t \geq p$

As with Holt's linear exponential smoothing,  $\alpha$ ,  $\beta$  and  $\gamma$  can be selected subjectively or by minimizing a measure of forecast error such as MSE. The most common approach for determining this value is to use a nonlinear optimization algorithm to find optimal smoothing constants.

### Analysis of Model Output

Year	Month	$Y_t$	-	$T_t$	$S_t$		MSE
2012	January	283750	217215	66535	1.306	283750	0
	February	262306	217215	45091	1.208	283750	459845136
	March	248965	217215	31750	1.146	262306	177982281
	April	185338	217215	-31877	0.853	248965	4048395129
	May	151098	217215	-66117	0.696	185338	1172377600
	June	176716	217215	-40499	0.814	151098	656281924
	July	224432	217215	7217	1.033	176716	2276816656
	August	196517	217215	-20698	0.905	224432	779247225
	September	162326	217215	-54889	0.747	196517	1169024481
	October	181605	217215	-35610	0.836	162326	371679841
	November	209685	217215	-7530	0.965	181605	788486400
	December	323841	217215	106626	1.491	209685	13031592336
2013	January	228150	246516	29301	1.149	356502	16474140116
	February	227529	230517	-15999	1.117	281900	2956209920
	March	225558	205331	-25186	1.127	212180	178979997
	April	155378	181159	-24172	0.855	183841	810158932
	May	132998	174717	-6442	0.723	164345	982642589
	June	143100	172224	-2493	0.821	169476	695705222
	July	186432	175280	3056	1.046	169649	281671918
	August	161477	178413	3133	0.905	178045	274492173
	September	151721	192678	14265	0.764	180754	842911700
	October	212191	231228	38550	0.870	204604	57559341
	November	243566	260726	29498	0.952	268442	618816807
	December	260561	230384	-30342	1.342	304703	1948547948
2014	January	274215	220024	-10360	1.189	195512	6194156965
	February	262692	222926	2902	1.142	208456	2941571453
	March	218473	209298	-13627	1.092	226194	59617284
	April	160941	191808	-17490	0.848	197646	1347243983
	May	141508	185459	-6349	0.739	179168	1418313111
	June	176324	197632	12173	0.850	180249	15405656
	July	225359	212755	15124	1.051	210361	224926005
	August	204940	227158	14402	0.904	226440	462256300
	September	191339	246190	19032	0.769	238159	2192125486
	October	260569	283042	36852	0.891	262742	4722135
	November	290583	312215	29172	0.944	318144	759601983
	December	319271	287709	-24506	1.247	351378	1030882406
2015	January	337345	273802	-13907	1.207	258564	6206497079
	February	331697	275720	1918	1.167	257919	5443190011
	March	293185	272839	-2880	1.085	277814	236254776
	April	223884	266800	-6039	0.845	270395	2163283586
	May	185502	255658	-11142	0.734	262336	5903466668
	June	223122	253807	-1851	0.862	246185	531918756
	July	272456	255688	1881	1.057	251861	424155268

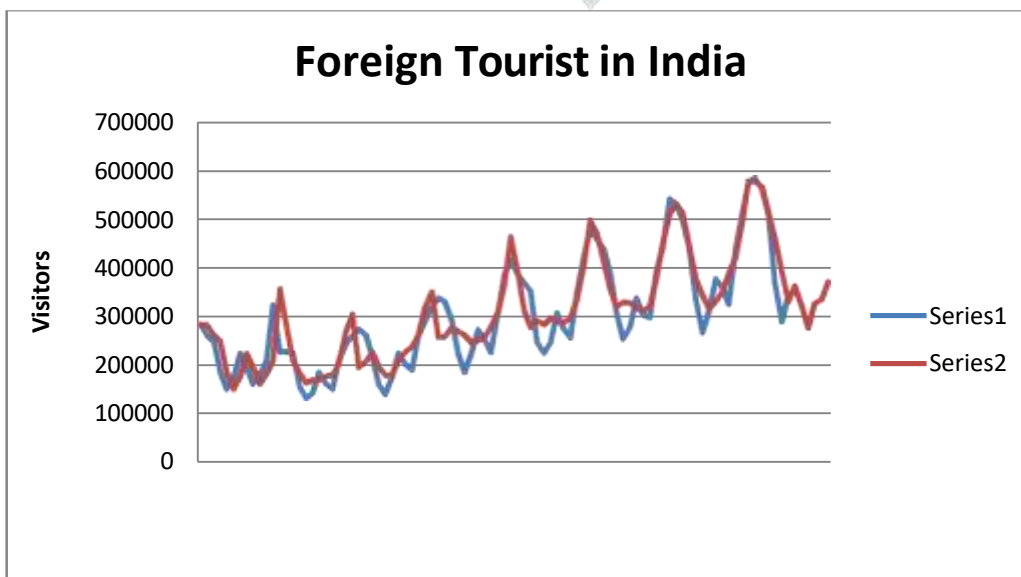
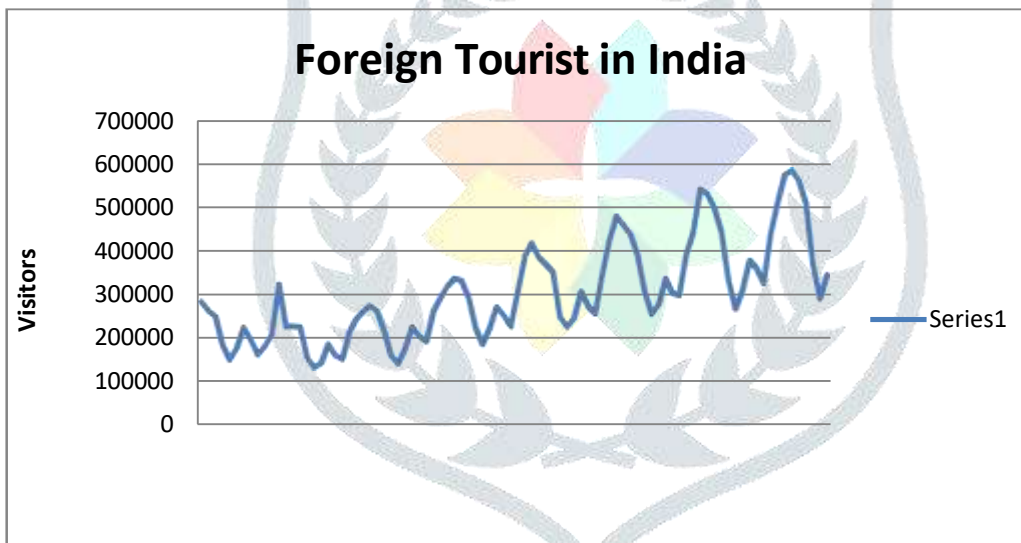
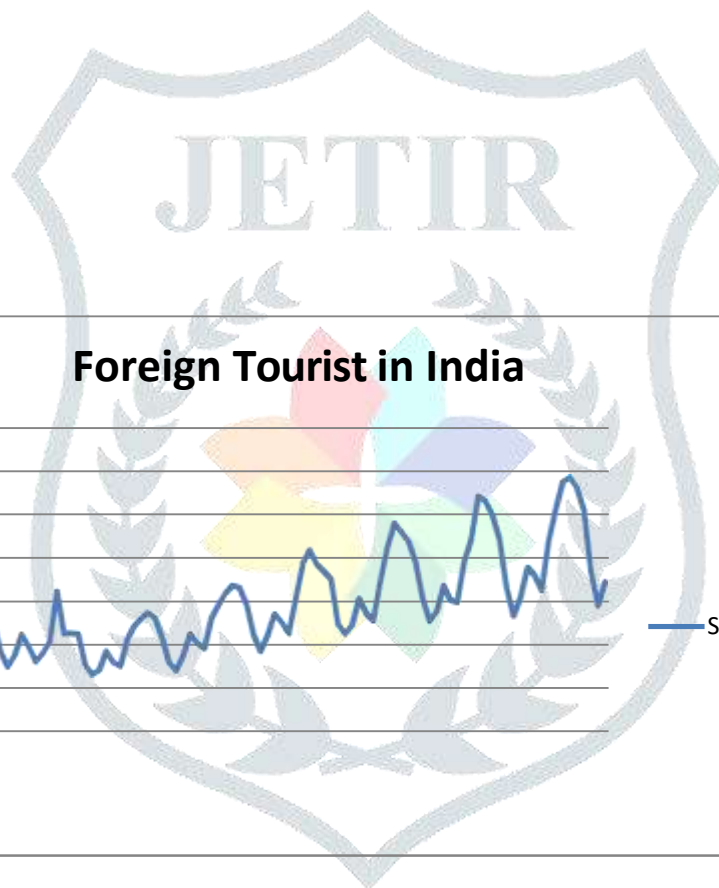


	August	253301	269337	13649	0.919	257388	16704916
	September	226773	289087	19750	0.776	279838	2815935651
	October	307447	327672	38585	0.910	306678	591139
	November	385238	388049	60377	0.964	364077	447776797
	December	417527	389616	1567	1.174	463309	2096014410
2016	January	385977	354185	-35431	1.159	391507	30577112
	February	369844	317771	-36413	1.166	312829	3250673965
	March	352094	303714	-14057	1.116	278261	5451385424
	April	248416	291966	-11748	0.847	291841	1885732953
	May	225394	294215	2249	0.747	283347	3358581105
	June	246970	291287	-2929	0.856	296155	2419126445
	July	307870	289838	-1449	1.059	288190	387299255
	August	273856	293385	3547	0.925	288506	214631109
	September	257184	314902	21517	0.793	296136	1517262392
	October	347757	360054	45152	0.933	334490	176022308
	November	423837	423109	63055	0.979	403572	410689750
	December	479411	445764	22655	1.134	497162	315082302
2017	January	459489	431187	-14578	1.120	472013	156855084
	February	439090	395888	-35299	1.142	414192	619931054
	March	391009	355344	-40544	1.109	356506	1190466698
	April	309208	340809	-14535	0.872	320996	138958389
	May	255008	334096	-6713	0.754	329951	5616462985
	June	278370	326206	-7890	0.855	328349	2497872027
	July	337332	318389	-7817	1.059	317848	379634542
	August	304387	320179	1789	0.936	311160	45871928
	September	297891	349905	29727	0.817	321597	561972954
	October	391399	400249	50344	0.952	377647	189124645
	November	442413	451166	50916	0.980	449559	51059735
	December	541571	489465	38299	1.122	508885	1068371252
2018	January	532088	500395	10931	1.097	532370	79754
	February	498806	472600	-27795	1.107	512883	198162005
	March	444186	421789	-50811	1.086	441765	5863091
	April	333945	377198	-44590	0.877	377483	1895551794
	May	267758	344342	-32857	0.764	343589	5750406573
	June	310104	338017	-6324	0.881	316248	37746030
	July	377474	344458	6441	1.074	331317	2130435831
	August	360089	368525	24067	0.953	350484	92253101
	September	325893	395910	27385	0.819	388183	3880066556
	October	440715	443934	48023	0.969	421971	351337757
	November	510987	507247	63313	0.991	490993	399766527
	December	575148	540426	33179	1.098	578311	10003495
2019	January	584765	552640	12214	1.081	576817	63177057
	February	560658	534691	-17949	1.083	566155	30221627
	March	509926	492243	-42448	1.065	515195	27761232
	April	369677	435024	-57219	0.866	454996	7279346372
	May	290785	379370	-55654	0.765	391334	10110006748
	June	344526	358676	-20694	0.914	330352	200892418
	July				1.027	363130	1759854454
	August				0.956	321985	
	September				0.878	276946	
	October				0.965	327365	

	November				0.979	335022	
	December				1.042	371251	

**Table1. Estimated weights and MSE of Winter Model**

	A	$\beta$	$\gamma$	MSE
Winter	0.518302	1	0.412327	1759854454



**Table2. Forecasted value of Foreign Tourist in India**

Year	July	August	September	October	November	December
2018	363130	321985	276946	327365	335022	371251

After plotting the forecasted data into the graph we can see that there is an increasing trend after September 2018. It indicates the foreigners are more like to visit India in winter seasons. If we compare total visitor of 2017 with 2018 then we can see that there is a 6.45% decline growth compare to the last year.

**Table3. Percentage Change in Foreign Tourist Arrival**

Percentage Changes in Foreign Tourists Arrival							
	2012/11	2013/12	2014/13	2015/14	2016/15	2017/16	2018/17
January	-19.6	20.19	23.02	14.4	19.05	15.80	9.90
February	-13.3	15.45	26.27	11.5	18.72	13.60	12.40
March	-9.4	-3.14	34.20	20.1	11.05	13.60	14.80
April	-16.2	3.58	39.11	11.0	24.47	8.00	10.70
May	-12.0	6.40	31.09	21.5	13.14	5.00	8.60
June	-19.0	23.22	26.54	10.7	12.71	11.40	11.10
July	-16.9	20.88	20.90	13.0	9.57	11.90	-3.80
August	-17.8	26.92	23.60	8.1	11.15	18.30	-10.58
September	-6.5	26.11	18.52	13.4	15.83	9.40	-15.02
October	16.8	22.80	17.99	13.1	12.55	12.60	-25.72
November	16.2	19.30	32.57	10.0	4.38	15.50	-34.44
December	-19.5	22.53	30.78	14.8	12.97	6.20	-35.45

### Conclusion:

From the statistical analysis it can be concluded foreign tourist number who visits India is significantly increased from 2018. And tourists are mainly interested to visit during the winter season. There is a decline number during the 2017-18 seasons, because many developed countries are suffered with recession in that season.

If Tourism department of India is starting many other campaigns , promotional activities along with 'incredible India', then India can attract more number of tourists and also India is getting more tourists from US, UK, France...etc. but Tourism department have to promote Indian tourism in developing countries also.

Thus, it can be concluded that tourists likely to visit India during winter season is having more chances. And tourists from developed countries are more in number.



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