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Growth and Trend Analysis of Indian Tourism

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Abstract: ***Tourism is the most vibrant tertiary activity and a multi-billion industry in India. Traditionally known largely for its historical and cultural dimensions, tourism today is highlighted for its immense business opportunities. Tourism is a major engine of economic growth and important sources of foreign exchange earnings in India. Travel and tourism industry is the second highest foreign exchange earner for India. It is also a major contributor to the national integration process of the country and encourages preservation of natural as well as cultural environments. India's travel and tourism sector ranks seventh in the world in terms of its total contribution to the country's Gross Domestic Product, shows a new report by the World Travel & Tourism Council. In the present paper the growth and development of Indian tourism industry has been studied. For this purpose, data has been collected from secondary sources such as Market Research Division, Ministry of Tourism, Government of India and Incredible India (2017).Compound Annual Growth Rate (CAGR) and Trend Analysis have been calculated. Results showed that tourism is the largest service industry in India, with a contribution of Compound Annual Growth Rate (CAGR) was increases to 10.54% in International Tourist Arrivalsand 11.75% in Foreign Exchange Earnings. The predicted estimate of International Tourist Arrivals in the year 2018 is 13 million and the Foreign Exchange Earnings is US$ 21297 million.***

Keywords: Growth, Trend Analysis and Foreign Exchange Earnings.

I. INTRODUCTION

India, the country have all the specifications possessed by a continent and hence called Indian subcontinent.This subcontinent is one of the popular tourist destinations in Asia. India is the country, have diverse traditions and customs preserved as an asset. Tourists from all over the world, gets curiosity about the facts and heritage of tourist destinations in India.Tourist spots in India has wide range of places to see and things to do. The delighting backwaters, hill stations and landscapes make India a beautiful country. Historical monuments, forts, beaches, places of religious interests, hill resorts, etc. which are the Indian premises, promote international and domestic tourism in the country.UnderMinistry of Tourism, the Indian Tourism Development Corporation was formed in October 1966. The scope of tourism sector has been reflected by ITDC by promoting engineering infrastructures and innovations in the field of Tourism. Tourismindustry has the ability to influence country's GDP indirectly. Moreover this sector helps in hiking the foreign exchange earnings down the years.In India, the tourism sector grows consistently every year which results in infrastructure, information aimed at promotion of tourist sites in the world market and formulates policies and programs for the promotion of tourism in India. Some authorities known the Indian Institute of Tourism and Travel Management, The National Council for Hotel management and Catering technology etc. through the efforts made by the authorities, Tourism India has become more accessible, the number of international tourist arrivals has greatly increased.According to World Economic Forum, India has seen continued growth in international arrivals over the past 15 years, reaching the 8 million in 2015.Tourism has great potential for earning large amount of Foreign Exchange

Earnings.An individual who makes multiple trips to the country is counted each time as a new arrival. Foreign Exchange Earnings from tourism are the receipts of the country as a result of consumption expenditure and payments made for goods and services acquired, by foreign visitors in the economy out of the foreign currency brought by them.

II. Objectives of the Study

1. To study the growth and development of tourism industry in India.
2. To analysis the trends and growth of tourism in India

III. Scope of the Study

The following are the scope and highlights of Indian Tourism,Increase in GDP making the tourism industry a unifying force, increase in International Trade, giving more innovative promotion all measures for tourism, Offering more Tourism Education and motivating private sectors to attract more tourist. Tourism is an ever changing industry. The arrival and departures of tourist and the exchange earnings from tourism industry were the major factorsof tourism management. By determining these factors statistically, many entrepreneurs based on tourism industry will develop their business strategy.

IV. Data Base And Tools Used To Study

For the data collection, secondary sources have been used from websites of Ministry of Tourism of India, Tourism Corporations Incredible India, Govt. of India, World Tourism Organization (WTO), World Travel and Tourism Council (WTTC) and Annual reports of Tourism Ministry, India. Foreign tourist arrivals (FTAs), Foreign exchange earnings (FEEs),Domestic and foreign tourist's visits were the base data observed for the period of 16 years from 2000 to 2016 from the website. Compound Annual Growth Rate (CAGR), Trend analysis and Analysis of variance methodhas been calculated (ANOVA Table). The data were coded and prepared for analysis using the Statistical Package for Social Sciences (SPSS).

COMPOUND ANNUAL GROWTH RATE (CAGR):

The compound annual growth rate (CAGR) is a business and invest term that is used to refer the mean annual growth rate of an investment over a certain period of time usually longer than one year. The formula for calculating compound annual growth rate is,

CAGR = ((End Value/Start Value) ^ (1/ (Periods)) -1

GENERAL LINEAR REGRESSION EQUATION:

A linear regression line has an equation of the form **Y = a + bX**, where**X** is the explanatory variable and **Y** is the dependent variable. The slope of the line is **b**, and **a** is the intercept.

DATA REPRESENTATION

Data is represented by graphs created throughSPSS - 17.0 and Spread Sheet.

V. Review Of Literature

- **Kavitha Chavali and Subrat Sahu (2008)** has studied the importance of website as an information source in the promotion of tourism destinations which in particular attracts new visitors. The websites play an important role in promoting tourism but it is not the only influencing factor which influence the decision of the tourist.

- **Mandeep Kaur and Nitasha Sharma (2012)**has studiedtourism industry in India is growing and it has vast potential for generating employment and earning large amount of foreign exchange too besides giving a support to the country's overall economic and social development.
- **Rupal Patel (2012)**has studiedtourism is today emerging as a leading sector in the world and is now considered by some as the number one industry. Demographic, socio-structural and socio-cultural developments have always led to changes in tourist demands, and service providers in tourism are faced with a substantial need to adjust. These constant challenges have expanded and intensified considerably in the first few years of the new millennium.
- **Subash (2015)**has studiedthe travel and tourism industry has emerged as one of the largest and fastest growing economic sectors globally. Its contribution to the global Gross Domestic Product and employment has increased significantly. The Indian tourism industry has emerged as one of the key drivers of growth among the services sector in India
- **Vethirajan and Nagavalli (2014)**has studiedtourism is a service industry and can have a significant effect on those countries with surplus labor.

VI. Results And Discussions

TABLE 1: INTERNATIONAL TOURIST ARRIVALS

YEAR	INTERNATIONAL TOURIST ARRIVALS (IN US$ MILLION)	PERCENTAGE (%) CHANGE
2000	2.65	-
2001	2.54	-4.15
2002	2.38	-6.29
2003	2.73	14.70
2004	3.46	26.739
2005	3.92	13.29
2006	4.45	13.52
2007	5.08	14.157
2008	5.28	3.94
2009	5.17	-2.08
2010	5.78	11.79
2011	6.31	9.16
2012	6.58	4.27
2013	6.97	5.92
2014	13.11	88.09
2015	13.28	1.296
2016	14.57	9.713
CAGR	10.54 %	

The above table shows that the year 2014 witnesses a growth of 88.08 percent in ITA over the year 2014 which is higher than growth of 5.92 percent in the year 2013 over the year 2012. During the year 2009 the visits by international tourists have shown a negative growth of 2.08 percent over the year 2008 as compared to an increase of 3.94 percent in the year2008 over the year 2007.The CAGR for ITA in India during the year 2000 to 2016 was 10.54%.

REGRESSION ANALYSIS:

TABLE 1.1 MODEL SUMMARY

MODEL	R	R^2	Adjusted R Square	Standard Error of the Estimates
1	0.989[a]	0.978	0.977	0.31007

The above table provides R and R Square values. The R value represents the simple correlation and is 0.989, which indicates high degree of correlation. The R Square value indicates how much of the total variation in the dependent variable (ITAs), can be explained by the independent variable. The value of R square is 0.978, which mean this about 97.8% variations in ITA can be explained by year through this linear model.

TABLE 1.2 ANOVA

	Model	Sum of squares	d.f.	Mean squares	F	Significance
1	Regression	190.131	1	190.131	56.799	0.000[a]
	Residual	50.211	15	3.3474		
	Total	240.342	16			

The above table indicates that the regression model predicts the dependent variable significantly well. Here p< 0.05 and indicates that overall the regression model statistically significantly predicts the outcome variable.

TABLE 1.3 CO-EFFICIENTS

Model	Under standardized Co-efficient	
	B	Standard Error
1 (constant)	-0.011	0.928
CODE	0.683	0.091

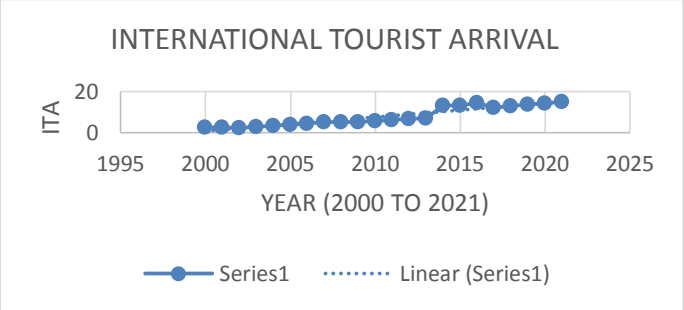
From this table we can get necessary information to predict ITA from year 2017 to year 2021.The least square trend line becomes $Y = -0.011 + 0.683X$.

PREDICTED VALUES:

TABLE 1.4

YEAR	INTERNATIONAL TOURISTS ARRIVALS (IN MILLIONS)
2017	12.28
2018	12.97
2019	13.65
2020	14.33
2021	15.02

CHART 1.1



The above table shows the estimated ITA for the year 2017, 2018, 2019, 2020 and 2021 is 12.283 million, 12.966 million, 13.649 million, 14.332million and 15.01million respectively. The chart depicts the trend line for the data with slope 0.683.

TABLE 2: FOREIGN EXCHANGE EARNINGS FROM TOURISM IN INDIA

YEAR	FOREIGN EXCHANGE EARNINGS (IN US$ MILLION)	PERCENTAGE (%) CHANGE OVER THE PREVIOUS YEAR
2000	3460	-
2001	3198	-7.57
2002	3103	-2.97
2003	4463	43.82
2004	6170	38.24
2005	7593	23.06
2006	8634	13.7
2007	10729	24.26
2008	11832	10.28
2009	11136	-5.88
2010	14193	27.45
2011	16564	16.7
2012	17737	7.08
2013	18445	3.99
2014	20236	9.7
2015	21071	4.12
2016	22923	8.78
CAGR	11.75%	

The above table shows that FEE from tourism during the year 2016 were US$ 22923 million as compared to US$ 21071 million during the year 2015 and US$ 20236 million during the year 2014. The growth rate in FEEs in US$ term during the year 2013 was 3.99 percent in the year 2014 over the year 2015.The CAGR for FEEsin India during the year 2000 to 2016 was 11.75%.

REGRESSION ANALYSIS:

TABLE 2.1MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787[a]	.619	.593	4305.720

This table provides R and R Square values. The R value represents the simple correlation and is 0.787, which indicates high degree of correlation. The R Square value indicates how much of the total variation in the dependent variable (FEEs), can be explained by the independent variable. The value of R square is 0.619, which mean this about 61.9% variations in FEEs can be explained by year through this linear model.

TABLE 2.2 ANOVA

Model		Sum of Squares	D.f.	Mean Square	F	Sig.
1	Regression	4.511	1	4.511	24.334	.000[a]
	Residual	2.781	15	1.854		
	Total	7.292	16			

The above table indicates that the regression model predicts the dependent variable significantly well. Here p< 0.05 and indicates that overall the regression model statistically significantly predicts the outcome variable.

TABLE 2.3 COEFFICIENTS

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	1317.713	2184.290
	CODE	1051.542	213.165

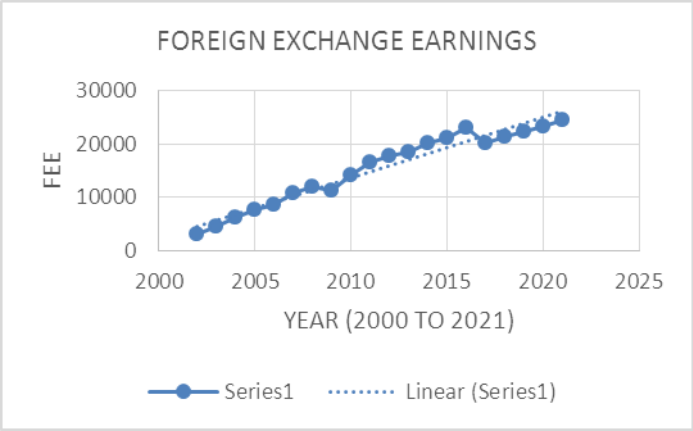
From the above table we can get necessary information to predict FEEs from year 2017 to year 2021. The least square trend line becomes $Y = 1317.713 + 1051.542\,X$.

PREDICTED VALUES:

TABLE 2.4

YEARS	FOREIGN EXCHANGE EARNINGS (IN US$ MILLIONS)
2017	20245.42
2018	21296.96
2019	22348.5
2020	23400.04
2021	24451.58

CHART 2.



The above table shows that estimated FEEs for the year 2017, 2018, 2019, 2020, and 2021 is US$ 20245.42 million, US$ 21296.96 million, US$ 22348.5 million, US$ 23400.04 million and US$ 24451.58 million respectively. The chart depicts the trend line for the data with slope 1051.5.

TABLE 3: FOREIGN TOURIST VISIT TO ALL STATES

YEAR	FOREIGN TOURIST VISITS (IN US$ MILLION)	PERCENTAGE (%) SHARE
2000	5.89	1.1
2001	5.44	-7.8
2002	5.16	-5.1
2003	6.71	30.1
2004	8.36	24.6
2005	9.95	19.0
2006	11.75	18.1
2007	13.27	12.9
2008	14.38	8.4
2009	14.37	-0.1
2010	17.91	24.6
2011	19.50	8.9
2012	18.26	-6.3
2013	19.95	9.2
2014	22.33	11.9
2015	23.33	4.4
2016	24.71	5.92
CAGR	8.8%	

The above table shows that the foreign tourist visits during the year to 2000to 2016 witnessed a CAGR of 8.8 percent. The foreign tourist visits have been increased over the year, though there was a negative growth in the year 2001, year 2002, year2009 and year 2012.The CAGR for FTV in India during the year 2000 to 2016 was 8.8%.

REGRESSION ANALYSIS:

TABLE 3.1MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990	.980	.978	.97103

The above table provides R and R Square values. The R value represents the simple correlation and is 0.990, which indicates high degree of correlation. The R Square value indicates how much of the total variation in the dependent variable (FTV). The value of R square is 0.980, which mean this about 98% variations in FTV can be explained by year through this linear model.

TABLE 3.2 ANOVA

Model		Sum of Squares	D.f.	Mean Square	F	Sig.
1	Regression	679.882	1	679.882	721.060	.000[a]
	Residual	14.143	15	.943		
	Total	694.025	16			

The above table indicates that the regression model predicts the dependent variable significantly well. Here p< 0.05 and indicates that overall the regression model statistically significantly predicts the outcome variable.

TABLE 3.3 COEFFICIENTS

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	2.574	.493
	CODE	1.291	.048

The least square trend line becomes $Y = 2.574 + 1.291X$, from this table we can get necessary information to predict FTV from year 2017 to year 2021.

TABLE 3.4

YEARS	FOREIGNTOURIST VISIT (IN MILLION)
2017	25.812
2018	27.103
2019	28.394
2020	29.685
2021	30.976

CHART 3.1

The above table shows the estimated FTV for the year 2017, 2018, 2019, 2020, and 2021 is 25.812 million, 27.103 million, 28.394 million, 29.685 million and 30.976 million respectively. The chart depicts the trend line for the data with slope of 1.29.

TABLE 4: DOMESTIC TOURIST VISIT TO ALL STATES

YEAR	DOMESTIC TOURIST VISIT (IN MILLION)	PERCENTAGE (%) SHARE
2000	220.11	15.4
2001	236.47	7.4
2002	269.60	14.0
2003	309.04	14.6
2004	366.27	18.5
2005	392.04	7.0
2006	462.44	18.0
2007	526.7	13.9
2008	563.03	6.9
2009	668.8	18.8
2010	747.7	11.8
2011	864.53	15.6
2012	1045.05	20.9
2013	1142.53	9.3
2014	1282.8	12.3
2015	1431.97	11.6
2016	1613.53	12.7
CAGR	12.42%	

The above table shows that the year 2012 witnessed a growth of 20.9% of Domestic Tourists Visits over the year 2011.The CAGR for DTV in India during the year 2000 to 2016 was 12.42%.

REGRESSION ANALYSIS:

TABLE 4.1 MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.966[a]	.933	.929	118.57163

This table provides R and R Square values. The R value represents the simple correlation and is 0.966, which indicates high degree of correlation. The R Square value indicates how much of the total variation in the dependent variable (DTV).The value of R square is 0.980, which mean this about 98% variations in DTV can be explained by year through this linear model.

TABLE 4.2ANOVA

Model		Sum of Squares	D.f.	Mean Square	F	Sig.
1	Regression	2935525.205	1	2935525.205	208.797	.000[a]
	Residual	210888.455	15	14059.230		
	Total	3146413.660	16			

The above table indicates that the regression model predicts the dependent variable significantly well. Here p< 0.05 and indicates that overall the regression model statistically significantly predicts the outcome variable.

TABLE 4.3 COEFFICIENTS

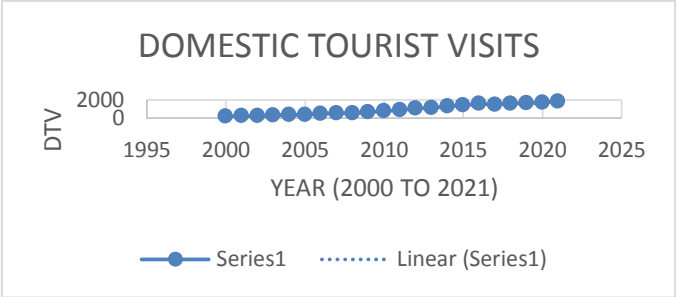
Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	-49.134	60.151
	CODE	84.823	5.870

From the above table we can get necessary information to predict ITA from year 2017 to year 2021.The least square trend line becomes $Y = -49.134 + 84.823X$.

PREDICTED VALUES:

TABLE 4.4 CHART 4.1

YEARS	DOMESTIC TOURIST VISIT (IN MILLON)
2017	1477.68
2018	1562.503
2019	1647.326
2020	1732.149
2021	1816.972



The above table shows the estimated DTV for the year 2017, 2018, 2019, 2020, and 2021 is 1477.68 million, 1562.503 million, 1647.326 million, 1732.149 million and 1816.972 million respectively. The chart depicts the trend line for data with slope 84.23.

VII. FINDINGS

The four factors taken for the study were International Tourist Arrival, Foreign Exchange Earnings, Foreign Tourist Visit and Domestic Tourist Visit. By interpreting the results we can able to conclude that the Indian tourism is in uptrend with the following facts and figures.

- The CAGR for ITA in India during the year 2000 to 2016 is10.54%.
- The CAGR for FEEs in India during the year 2000 to 2016 is 11.75%.
- The CAGR for FTV in India during the year 2000 to 2016 is8.8%.
- The CAGR for DTV in India during the year 2000 to 2016is12.42%.
- In 2016, International Tourist Arrival was 14.57 million, and this figure was forecasted to rise to 15.02 million by 2021.
- In 2016, India's tourism industry was directly contribute US$22923 million dollars as Foreign Exchange Earnings_to the country's economy, and this figure was forecasted to rise to 24451.6 million by 2021.
- In 2016, Foreign Tourist Arrival was 24.71 million, and this figure was forecasted to 30.98 million by 2021.

- In 2016, Domestic Tourist Arrival was 1613.53 million, and this figure was forecasted to 1816.97 million by 2021.

VIII. CONCLUSION

Tourism in India is the industry was the culture, tradition and heritage of a country is utilized in profit making way. It's a platform to expose nation's legacy. Economically tourism plays a vital role in hiking the GDP of the country. Through the findings we can conclude that the main factors of tourism were in strong uptrend which results in sustainable development.

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