TOURISM AND ECONOMIC DEVELOPMENT IN INDIA: A CAUSALITY ANALYSIS

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I. INTRODUCTION

Economic Growth is a definitive intention of every economy in the world. In this hypercompetitive scenario there are numerous factors which impact the growth of the economy and impact the acceleration of the same. The global challenges of competitive forces make it extremely important for every economy to synchronize the contribution of various economic sectors towards the economic growth. In past few years the involvement of service sector towards the GDP and economic growth has considerably expanded. Tourism, from past few years has emerged out a brawny sector to impact the economic growth. Majority of the economies are developing themselves as a tourism hub in order to fetch the inflows of foreign exchange with increased footfall of the foreign travelers. There is an existence of various economies which are following a tourism dependent model of economic growth. The remarkable growth of Dubai, Singapore, Malaysia, Mauritius and European nations is a lively evidence of noteworthy contribution of tourism to the economic growth. It is matter of wide-ranging agreement that tourism is not only economically significant but also is a vital channel to cultivate social and cultural interaction across the world.

The realization of extreme sense of contribution of tourism towards the GDP and economic growth, the economies these days are pouring their lump sum investment in the development of tourism. Since from 1960, tourism has been observed as small sector with a sharp rate of growth. There has been momentous increase in the number of arrivals of international tourists, 681 million in 1980, to 438 million in 1990 and to 681 million in 2000. In the year 2009, the arrival of 880 million international tourists yielded the revenue of 852 million US Dollars (Mishra, Rout & Mohapatra, 2011). The number of Foreign Tourist Arrival worldwide in the year 2014 amounted to be 1135 million corresponding to International Tourism Receipts of 1245 billion US Dollars. In context of India, 7.68 million Foreign Tourists visited India in 2014 which observed that annual growth rate of 10.2%. India holds

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41st rank worldwide in World Tourist Arrivals with 0.68% share. The rank occupied by India in International Tourism Receipts is 15th with 1.58% share worldwide.

In the modern era, tourism has emerged out as a lucrative option for the economies to modulate the economic growth along with its sustainability. The preference to hold a preferred place amongst the choice of travelers is on the priority list of all the nations across the world. The nations are not only focusing upon their naturally gifted tourism places but also are having a strong urge to expand the manmade tourism destinations. Indian government has also taken numerous steps to make India as a preferred choice of travelers. The mission "Incredible India" has grabbed noteworthy attention in the few recent years. The sufficient attention has been given to the cultural diversity of India along with its natural beauty and grace. The spillovers of tourism sector and its economic implications are now an important concern for every nation. These days tourism has been identified as a sector with great potentialities. It is said to have enormous impact of creation of employment in the host nation along with much desired benefit of foreign exchange. The expanded cross cultural interaction and mutual cooperation of the international frontiers are the favorable byproducts of the same. Tourism is an important source for regional development and expansion along with the development of flourishing infrastructure.

The developing countries which are gifted with the natural beauty always hold tourism as a significant source of foreign exchange. Further the development of basic infrastructure, communication channels and media act as catalyst to make the developing countries as preferred tourist destination. The integration of tourism to other sectors of the economy is also an important reason for the development of this sector. In India, the integration of tourism with handloom's and handicrafts sector is worth noticing where maximum demand for all these domestic products is coming at all those places which are the tourist hubs in the nation.

In the year 2014, tourism sector has the benefaction of Rs 7.64 trillion and has lead to the creation of 36.7 million employment opportunities. By the completion of 2015, the tourism industry is expected to contribute Rs 8.22 trillion or 7% of India's gross domestic product (GDP) and the conception of 37.4 million jobs which would be just about 9% of total employment. The Travel and Tourism Competitiveness Report 2015 published by World Economic Forum ranks India 52nd for Travel and Tourism Competitiveness Index which has significantly improved since 2009. The Foreign Exchange Earnings from Tourism sector are significantly increasing since 1998. Further the focused initiative and tourism centric policies have casted a noteworthy impact upon the tremendous increase of Foreign Exchange Earnings from the year 2010 since the movement of Incredible India has been given a thorough revision and importance. The figure 1.1 presents the increasing trend of Foreign Exchange Earnings since 1998 to 2014 which takes a leap in the year 2010 and still continues with the same spirit.
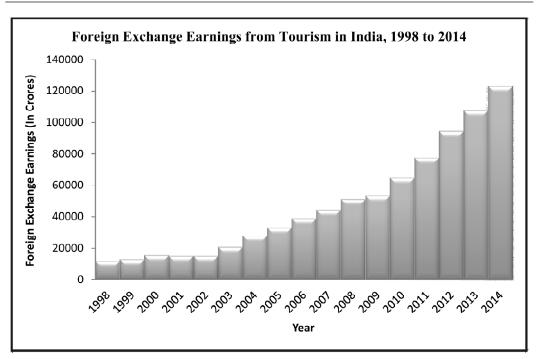
Figure 1.1: Foreign Exchange Earnings from Tourism in India, 1998-2014,
Source: India Tourism Statistics at a glance Report, 2014

The remarkable potential of tourism industry to increase a sense of mutual contribution is also an important aspect. The cross cultural interaction opens the new horizons of human development. So the impact of tourism is not only quantitatively restricted to generation of economic growth but also is qualitatively related to human development.

The tremendous potential of Tourism has made it not only an area of concern for the governments and the planning bodies of the nation but has also fascinated the researchers to look into the implications of the same on the various economic, social, cultural, political and geographical dimensions. The present study is an Endeavour to analyze the causal relationship between tourism and economic growth of India with respect to a sample period of 1991 to 2013. The main emphasis of the study is to get justified evidence for analyzing the existence of significant impact of tourism and its growth on the economic growth of India. The arrangement has been segregated in various chapters dealing with Review of Literature, Database and Methodology, Results and Discussions and Summery and Conclusion.

II. REVIEW OF LITERATURE

Balaguer and Cantavella (2002) analysed the impact of tourism on the growth of Spain using a model based upon variables such as Gross Domestic Product,

international tourism receipts and effective exchange rate. All these variables were taken on real basis and the study concluded the existence of positive relationship between international tourism and economic growth of Spain.

Dritsakis (2004) investigated tourism as a long run economic growth factor. The analysis was done for the case of Greece and the methodology used was causality analysis. The sample for data was of 1960 to 2000 and a Multivariate Auto Regressive (VAR) model along with Granger causality tests was applied upon it. The study identified strong relationship between the earnings from tourism and economic growth of Greece.

Eugenio-Martin *et al.* (2004) conducted a detailed analysis of the association flanked by tourism and economic growth for a selected sample of countries of Latin America. The study dealt with the data for the span of 1985-1998 and the methodology used was panel data analysis. The investigation presented that the escalation in the number of tourists produces an affirmative effect on the economic growth of the countries with low and medium levels of income per capita. Such positive results have not been identified for rich countries. The study further concluded that the relative impact of tourism in the growth of developing countries is high then that of developed countries.

Proenca and Soukiazis (2005) analyzed Tourism as an alternative source of regional growth. The study was conducted for Portugal. The Conditional convergence equation in per capita income has been used to analyze the impact of tourism on economic growth. The correlation between the accommodation capacity and its impact on per capita income has been analyzed. The study presented that 1% increase in accommodation capacity in tourism sector impacts 0.01% increase in per capita income.

Sequeira *et al.* (2005) drafted a working study on the relationship between tourism and economic growth using Penal data approach. The paper took various variables such as Real Gross Domestic Product *per capita in the previous period*, Secondary Male Enrolment, Investment-Output ratio etc. to assess the impact of input variables on the growth of tourism leading to the growth of economy. The study presented that tourism is a highly influencing factor for the economic growth comparatively than the rich countries.

Sequeira and Nunes (2011) conducted detailed analysis of relationship between tourism and economic growth. The study adopted Dynamic Panel Data Approach to analyze the significance of tourism upon the economic growth of various economies segregated in different classifications. The study took into consideration various variable such as Tourist Arrivals as Population Proportion, Tourism receipts in percentage of Exports, Tourism receipts in percentage of GDP etc. The study concluded that a wide range of socio economic variables pertaining to impact the economic growth of the nation.

Fayissa *et al.* (2007) analyzed the impact of tourism on the economic growth of Africa. The study was conducted for the sample of 42 African countries and the analysis has been drawn using Penal data approach. The results emphasized that there is a significant contribution of receipts from the tourism sector in the current GDP and economic growth due to an influential impact upon human and physical capital.

Ivanov and Webster (2009) investigated the contribution of tourism to the economic growth of three countries of Europe such as Cyprus, Greece and Spain. The study decomposed the contribution of various industries towards the GDP. Real GDP Per Capita has been used as an indicator of economic growth. The investigation was conducted by developing a model of different defined variables with respect to all the three nations and the impact of all these variables on the growth of tourism has been analyzed. Further the impact of the development of tourism upon real GDP per capita has been investigated for all the sample nations.

Mishra *et al.* (2011) conducted a study to analyse the impact of tourism on the economic growth of India for the sample period of 1978 to 2009. The study used time series models and concluded the presence of unidirectional causality from tourism activities to economic growth of the country.

The Literature defined a sufficient body of work which has been conducted to analyse the role of tourism in the economic growth of an economy. The majority of the studies adopt Granger Causality Test or Panel Data Approach to study the relationship. But the present study differs from the existing literature on the terms of selection of time period and variables to be taken in the consideration. The present study is an attempt to study the existence of relationship between the economic growth and tourism figures using Granger Causality Test with an objective of fetching reliable results.

III. DATABASE AND METHODOLOGY

The present study is conducted to analyse the existence of Causal relationship between the expansion of tourism industry and economic growth of India.

Development of tourism industry and economic growth in context of India has been analysed in the study by taking the sample period from the years 1991 to 2013. The study identified a set of variables to investigate the relationship. The annual data of Real Gross Domestic Product (RGEDP) which is a comprehensive indicator of the economic growth of the country by and large and Foreign Exchange Earnings from Tourism (FEET) and Tourist Arrivals from Foreign (TAF) as signs of the growth of tourism industry. Data collected over a period of time is time series and collected on annual basis. There are few resources which has been primarily used for the collection of data like (Tourism statistics report) published by Ministry of Tourism, Government of India. The supplementary data has been

collected from the websites of Reserve Bank of India, Database of Immigration Bureau. In order to remove the problem of heteroscedasticity all the variables have been converted into their natural logarithms. Augmented Dickey-Fuller unit roots test has been applied to test the stationarity of the data. Further Johansen's cointegration test and Granger causality test have been applied to analyse the long-run equilibrium relationship between RGEDP, FEET and TAF along with direction of causal relationship between identified variables.

IV. RESULTS AND DISCUSSIONS

In the beginning, the Pearson's correlation coefficient between Real GDP and Foreign Arrivals (FTANs) in India, and between Real GDP and Foreign Exchange Earnings (FEECs) from tourism has been calculated over the sample period and their significance has been tested by the t-test. The value of Pearson's correlation coefficient (r) between Real GDP and FTANs is 0.962. Similarly, the correlation coefficient between Real GDP and FEECs is 0.946. It shows that these three variables are positively related over the sample period in India and that to a very high degree of correlation is evident between them. To test whether these values of 'r' shows significant relationships between three time series, student's t-test has been used. The null hypothesis of the test is r = 0 against the alternative of r = 0 for both the correlations. Since the t-statistic value is significant at 5% and 1% level of significance, the null hypotheses that correlation coefficient is not significant is rejected. So, it can be said that the correlation between the variables of the study are statistically significant. Correlation, however, does not say anything about long-run relationship and thus, leaves unsettled the debate concerning the long-run relationship between tourism sector expansion and economic growth in India. As an essential step of time series empirical analysis, it is first, required to determine the order of integration for each of the three variables used in the analysis. The Augmented Dickey-Fuller unit root test has been used for this purpose and the results of such test are reported in Table-1. And, it is clear that the null hypothesis of no unit roots for all the time series are rejected at their first differences since the ADF test statistic values are less than the critical values at 1%, 5% and 10% levels of significances. Thus, the variables are stationary and integrated of same order, i.e., I(1).

In the next step, the cointegration between the stationary variables has been tested by the Johansen's Trace and Maximum Eigen value tests. The results of these tests are shown in Table 2. The Trace test indicates the existence of one cointegrating equation at 5% level of significance. And, the Maximum Eigen value test makes the confirmation of this result. Thus, the three variables of the study have long-run equilibrium relationship between them. But in the short-run there may be deviations from this equilibrium and we have to verify whether such disequilibrium converges to the long run equilibrium or not. And, Vector Error

Table 1
Results of Augmented Dickey-Fuller Unit Root Test

Variables in their First Differences with intercept	ADF Statistic	Critical Values	Decision
LRGDP	-7.558	At 1% : -3.788 At 5%:-3.012 At 10%:-2.646	Reject Null hypothesis of unit root
LFTANs	-3.983	At 1%: -3.808 At 5%:-3.020 At 10%: -2.650	Reject Null hypothesis of unit root
LFEECs	-4.522	At 1%: -3.788 At 5%:-3.012 At 10%: -2.646	Reject Null hypothesis of unit root

Correction Model can be used to generate this short-run dynamics. Error correction mechanism provides a means whereby a proportion of the disequilibrium is corrected in the next period. Thus, error correction mechanism is a means to reconcile the short-run and long-run behaviour.

Table 2
Results of Johansen's Cointegration Test

Hypothesized Number of Cointegrating Equations	Eigen Value	Trace Statistics	Critical Value at 5% (p-value)	Maximum Eigen Statistics	Critical Value at 5% (p-value)
None	0.594	27.872	29.797(.080)	18.951	21.132(0.098)
At Most 1	0.337	8.92	15.494(.372)	8.653	14.264(.316)
At Most 2	0.012	0.267	3.841(.605)	0.267	3.841(.605)

The estimation of a Vector Error Correction Model (VECM) requires selection of an appropriate lag length. The number of lags in the model has been determined according to Schwarz Information Criterion (SIC). The lag length that minimizes the SIC is 1. Then, an error correction model with the computed t-values of the regression coefficients is estimated and the results are reported in Table 3.

The estimated coefficient of error-correction term in the LGDP equation is statistically significant and has a positive sign, which confirms that there exists the long-run equilibrium relation between the independent and dependent variables at 10% level of significance, but its relative value (2.558) for India shows the rate of convergence to the equilibrium state per year. Furthermore, the existence of cointegration implies the existence of Granger causality at least in one direction (Granger, 1988). The positive, negative and statistically significant value of error correction coefficient indicates the existence of short run and long-run causality

Table 3
Estimates for VECM Regression

	$\Delta LRGDP\ t$	$\Delta LFTAN\ t$	$\Delta LFEEC_t$
ET_{t-1}	2.558455	0.167400	0.078970
[t-statistic]	(0.85955)	(0.11649)	(0.14268)
(p-value)	[2.97652]	[1.43708]	[0.55347]
$\Delta LRGDP_{t-1}$	-0.004109	0.028862	-0.009109
[t-statistic]	(0.24293)	(0.03292)	(0.04033)
(p-value)	[-0.01691]	[0.87668]	[-0.22590]
$\Delta LFTAN_{t-1}$	-1.860283	0.223896	0.264318
[t-statistic]	(2.51369)	(0.34066)	(0.41727)
(p-value)	[-0.74006]	[0.65725]	[0.63345]
$\Delta LFEEC_{t-1}$	-0.115243	-0.028485	1.580656
[t-statistic]	(0.32459)	(0.26500)	(1.95540)
(p-value)	[-0.35504]	[-0.10749]	[0.80836]
Constant	-0.019625	0.021899	0.060034
[t-statistic]	(0.10079)	(0.01366)	(0.01673)
(p-value)	[-0.19471]	[1.60320]	[3.58812]

between the variables of the study. As is evident from Table-3, there exists unidirectional causality running from foreign exchange earnings from tourism to real GDP in the long-run. However short-run causality between variables is also indicated in the Table 3. In order to confirm the result of the short-run causality between the **D**LGDP, **D**LFTAN and **D**LFEEC based on VECM estimates, a standard Granger causality test has been performed based on F-statistics.

Table 4
Results of Granger Causality

Null Hypothesis	F Statistic	Probability	Decision
$\Delta LFTAN$ does not Granger Cause $\Delta LRGDP$	11.4956	0.003	Reject
$\Delta LRGDP$ does not Granger Cause $\Delta LFTAN$	0.0071	0.933	Accept
$\Delta LFEEC$ does not Ganger Cause $\Delta LRGDP$	12.875	0.002	Reject
$\Delta LRGDP$ does not Granger Cause $\Delta LFEEC$	0.0178	0.894	Accept
$\Delta LFEEC$ does not Granger Cause $\Delta LFTAN$	3.28811	0.086	Accept
$\Delta LFTAN$ does not Granger Cause $\Delta LFEEC$	0.11378	0.739	Accept

(Number of Lags=1)

The result in Table 4 indicates that all the null hypotheses are accepted at 5% level of significance. These results support the previous results obtained from VECM about the non-existence of short-run causality at the 5% level of significance in case of the entire hypothesis except one. The hypothesis that Foreign Exchange

Earnings affects Real GDP in the short run as well is being proved with the Granger Causality.

V. SUMMARY AND CONCLUSIONS

The study in hand has been conducted in order to assess the existence of relationship between economic growth and tourism expansion. The study has adopted time series approaches to investigate the said objective. Initially Correlation has been used. It shows that these three variables are positively related over the sample period in India and that to a very high degree of correlation is evident between them. In order to test whether these values of 'r' shows significant relationships between three time series, student's t-test has been used. This concludes the significance of the correlation observed in the identified variables. The Augmented Dickey-Fuller unit root test has been used for analysing the long-run relationship between tourism sector expansion and economic growth in India. The test concluded that the variables are stationary and integrated of same order. In the next step, the cointegration between the stationary variables has been tested by the Johansen's Trace and Maximum Eigen value tests. According to these, the three variables of the study have long-run equilibrium relationship between them. But in the short-run there may be deviations from this equilibrium and we have to verify whether such disequilibrium converges to the long run equilibrium or not. And, Vector Error Correction Model can be used to generate this short-run dynamics. Error correction mechanism provides a means whereby a proportion of the disequilibrium is corrected in the next period. Thus, error correction mechanism is a means to reconcile the short-run and long-run behavior. The further analysis confirms that there exists unidirectional causality running from foreign exchange earnings from tourism to real GDP in the long-run. The Granger Causality Test results supports the previous results obtained from VECM about the non-existence of short-run causality. The hypothesis that Foreign Exchange Earnings affects Real GDP in the short run as well is being proved with the Granger Causality. The study concludes the existence of relationship between all the specified variables and short term and long term impact of cointegrated variables.

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