Tourism for Boosting Economic Growth and Development: An Analysis in the context of India in the Liberalized Era

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Abstract

Tourism is globally the major service industry, both in terms of gross revenue and foreign exchange earnings. It is renowned to have a positive effect on long-run economic growth. On one hand, tourism sector stimulates other industries by direct, indirect and induced effects and on the other hand; it contributes in employment generation and causes positive economies of scale. Tourism sector holds immense potential for the Indian economy. Tourism is the sum total of the operation, mainly of an economic nature which directly relates to the entry, stay and movement of foreigners inside and outside a certain country, city or region. The significant impact of international tourism in stimulating economic growth is admirable. For this reason, the relationship between international tourism and economic growth seems to be an interesting and contemporary empirical issue. The current research paper attempts to estimatethe impact of tourism industry in boosting economic growth and employment generation in India in the Liberalized Era.Augmented Dickey-Fuller (ADF) for unit root, Johanson for cointegration and Granger causality test have been considered to examine the causal relation between GDP and receipts from tourism sector in India by using the data over the period of 1991- 2016. The findings of the study showed a positive and significant relationship between economic growth (GDP) and Travel and tourism in India. It also showed a significant relationship between economic growth (GDP) and employment.

Keywords: Travel &Tourism, Economic Growth, Employment, India, Causality.
JEL Classification: C01, C13, C87, C22, J23

1. Introduction

Tourism sector holds immense potential for the Indian economy. It can provide impetus to other industries through backward and forward linkages and can generate huge revenue earnings for the country. The real importance of tourism lies not only in the fact that it contributes to the growth of the economy, in general, but also in the fact that this tourism growth can, given the right circumstances in its structural foundations, influence the economic and cultural progress of society, improving the welfare of the resident population. Tourism is the sum total of the operation, mainly of an economic nature which directly relates to the entry, stay and movement of foreigners inside and outside a certain country, city or region. According to Oxford English Dictionary (1933), "the tourist is one who makes a tour; for the purpose of recreation, pleasure or culture". Cohen (1978) has attempted to define tourism in his book, "Towards Sociology of International Tourism", as the tourism is a voluntary, temporary travelling in the expectation of pleasure. The World Tourism

Organization defines tourists as people "travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".

Tourism industry has emerged as one of the leading service industries in the global economy in recent decades. Economic flows generated by international tourism have become vital factors in economic growth and international economic relations in many countries especially countries like Maldives, Bahamas, Cambodiaetc. whose economy solely depends on tourism sector. According to the World Tourism Organization (2010), as a result of an ever-increasing number of destinations opening up and investing in tourism development, modern tourism has become a key driver for socio-economic progress through the creation of jobs and enterprises, infrastructure development and revenues earned. Between 1991 and 2016, there was an increase in international tourism receipts rising from US$ 277.5 billion in 1991 to US$ 1220 billion in 2016.Tourism generates a vital amount of foreign exchange earnings that contributes to the sustainable economic growth of the countries. Given its increasing importance in the global economy, tourism sector has gained much attention in recent academic literature. International tourism contributes to an income increase at least in two additional ways as the export-led growth hypothesis postulates.

In the first way, by enhancing efficiency through competition between local firms and the ones corresponding to other international tourist destinations (Bhagwati& Srinivasan, 1979; Krueger, 1980), and in the second way, by facilitating the exploitation of economies of scale in local firms (Helpman&Krugman, 1985; Balaguer&Jorda, 2002). The quick development of tourism lead to a growth of households' income and government revenues directly and indirectly by means of multiplier effect, improving balance of payment and provoking tourism promoted government policies. As a result, the development of tourism has usually been considered a positive contribution to economic growth.

United Nations has classified three forms of Tourism in its "Recommendations on Tourism Statistics":

   i.   Domestic tourism, which involves residents of the given country travelling only within the country.
   ii. Inbound tourism, involving non-residents travelling in the given country.
   iii. Outbound tourism, involving residents travelling to another country.

Tourism expenditure by foreign tourists can enhance domestic tourism construction as well as bring about an accumulation of physical capital, and the needs for skilled labour in the tourism sectors will cause human capital investment to increase. Thus, the tourism sector may contribute significantly to economic growth. On the one hand, it leads to an increase in production and income; and on the other hand, since tourism sector is labour intensive, it leads to an increase in employment in the economy.Tourism can stimulate economic growth in numerous ways. For instance, First, tourism significantly contributes to foreign exchange reserves which help in bringing new technologies for the production process (McKinnon, 1964). Second, tourism stimulates investments in new infrastructure, human capital and increases competition (Blake, Sinclair, & Campos, 2006; Lemmetyinen and Go, 2009). Third, tourism promotes industrial development through spillover effects (Cernat&Gourdon, 2012). Fourth, tourism creates jobs and hence stimulates earning (Lee & Chang, 2008).Finally, tourism generates positive economic externalities (Punia, 1994; Andriotis, 2002; Weng& Wang, 2004; Croes, 2006).

India is known as window of the world. The country has all wonders within its boundary for which tourists are giving visits from different parts of the world. Its visitor friendly traditions, varied life styles and cultural heritage,colorful fairs and festivals like the KumbhMela or the Kite festival of Gujarat hold abiding attractions for the tourists. The other attractions include beautiful beaches, forest and wild life as well as landscapes for eco-tourism, snow, rivers and

mountain peaks for adventure tourism like in Rishikesh, Ladakh, Andaman Islands; technological parks and science museums for science tourism; centers for pilgrimage for spiritual tourism like Jagannath temple in Puri, Vaishno Devi in Jammu and Kashmir, Golden temple in Amritsar; heritage, trains and hotels for heritage tourism like Forts & palaces of Rajasthan, Yoga, Ayurveda and natural health resorts and hill stations like Kullu, Manali in Himachal Pradesh. Birds' sanctuary of Bharatpur&Chilka Lake, world famous caves of Ajanta &Ellora also stood as important tourist resources in the country. It is the largest service industry in many countries. It has the potential to stimulate other economic sectors through its backward and forward linkages and cross sectoral synergies with sectors like agriculture, horticulture, handicrafts, transport, construction etc.The first major effort to promote the industry was launched with the announcement of 1991 as the 'Visit India Year'. Enormous tourist resources were commercialized. The first ever Indian Tourism Day was celebrated on January 25, 1998. The year 1999 was celebrated as 'Explore India Millennium Year' with a host of shows, exhibitions etc. The next decade saw the restructuring of the schemes of Integrated Development of Tourist Circuits, and Product/ Infrastructure Destination Development. Additional schemes/incentives were announced for service providers. Upgrading of beaches, airports, tax incentives were also introduced. To promote international and domestic tourism in the country, The Department of Tourism was formed. It provides infrastructure, information aimed at promotion of tourist sites in the world market, carries out publicity campaigns and formulates policies and programmes for the promotion of tourism in India. The Tourism Advisory Board recommends measures for promotion of tourist traffic in India. It reviews the tourist trends and suggests appropriate measures. The Indian Tourism Development Corporation (ITDC) organizes entertainment programmes like folk dances and songs and provides shopping facilities. The Planning Commission in the Approach Paper to the 12th Five Year Plan (2012-17) has mentioned that Tourism and Hospitality Sector has a key role to play in promoting faster, sustainable and more inclusive economic growth.

2. Review of Literature

Several studies havefocused on the impact of tourism industry on the economic growth and development. Research studies on the connection between tourism and economic growth was initiated by Ghali (1976). A study byChang et al. (2010) analyzed the relationship between tourism specialization and economic growth by considering panel regression found positive relation between tourism and economic growth. Another study by Ghartey (2010) shows the causal relationship among economic growth, tourism expansion and real exchange rate using co-integration.It states that, tourist's arrivals, real exchange rate and economic growth are co integrated. To investigate the factors that motivate and maintain economic growth, Kogid et al. (2010) considered cointegrationand causality test. They concluded by drawing the results as, all the determinant factors caused economic growth in the short run. In a study by Kreishan (2011), unidirectional causality was found from tourism earnings to economic growth. They studied the causality relationships between tourism earnings and economic growth (GDP) for Jordan by following Granger causality test. Suresh and Senthinathan (2014) studied the causality relationships between tourism earnings and economic growth in Sri Lanka. They built up their model following error correction model for their study. The result showed unidirectional causality running from tourism to economic growth.Chen (2009) investigated the impact of economy and tourism growth on the corporate performance of tourist hotels in Taiwan by considering panel regression and concluded that, both changes in GDP and tourist arrivals were found as significant explanatory factors. Brida et al. (2008)

studied the causal relationship between tourism expenditure, real exchange rate and tourism economic growth in Mexico. According to their study, causality goes from tourism expenditures to real GDP per capita.

The relationship between tourism and economic growth is one of the main topics of discussion in the growing field of tourism. (Figini and Vici, 2010). Lea (1988) and Sinclair (1998) have highlighted the potential of the tourism sector in promoting growth, creating jobs and generating revenue for the government. There are a number of empirical researches confirming the tourism industry's contribution to a country's economic growth (Kulendran and Wilson, 2000 for Australia; Shan and Wilson, 2001 for China; Lanza et al., 2003 for European Countries; Durbarry, 2004 for France; Narayan, 2004 for Fiji; Dritsakis, 2004 for Greece; Gunduz and Hatemi, 2005 for Turkey; Oh, 2005 for Singapore; Kim et al., 2005 for Taiwan and Louca, 2006 for Cyprus). Along with the increasing importance of the tourism industry for a country's economy, the issue of exploring the causality between tourism receipts and economic growth has gained more attention. Thus, over the past decades, international tourism has been gaining importance in many economies of the world and the development of tourism has generally been considered as a positive contribution to economicgrowth (Khalil et al., 2007).

Several previous studies in tourism sector have highlighted the tourism sector's potential in promoting growth, creating jobs and generating revenue for the government. However, there are very few empirical studies in this area which have analyzed the long-term and short-term effect of tourism on the economic growth of a country. The current research paper is based on the idea about the tourism-led economic growth hypothesis and economic-led tourism growth hypothesis for India.However, it is a major question as to whether there is a unidirectional, bidirectional or reciprocal relationship between tourism and economic growth. Accordingly, three hypotheses have been identified as tourism-led economic growth hypothesis, economic-driven tourism growth hypothesis and reciprocal causal hypothesis (Oh, 2005). According to the fifth Travel and Tourism Competitiveness Report of WorldEconomic Forum (2013), India has moved up by three steps from 68th rank in 2011 to65th Rank in 2013 out of 140 countries in terms of travel and industry. In ground transport infrastructure India ranked 42nd although the quality of roads and ports require further improvement. Switzerland, Germany and Australia lead the world in terms of their travel and tourism industry competitiveness. Others in the top ten are Spain (4th), United Kingdom (5th), United States (6th), France (7th), Canada (8th), Sweden (9th) and Singapore (10th).

Dearth of literature is found on the estimation of impact of tourism industry on economic growth and employment generation in Indian Economy in the liberalized era. In this study, we have tried to estimate the impact of tourism industry in boosting the economic growth and employment generation in India in the Liberalized Era.

3. Objectives of the study

i.   To assess the relation between economic growth and the growth in India's travel and tourism sector through time series analysis.
ii. To assess the relation between economic growth and employment in India's travel and tourism sector.
iii. To assess the long run relationship between the variables considered in our study.
iv. To examine the direction of causality between the variables.

4. Database and Methodology

Time series data is taken from several issues of Indian Tourism Statistics published by the Government of India, Ministry of Tourism (MOT) and World Travel and Tourism Council (WTTC) reports for India, covering a period of 26 years from 1991- 2016.

Description of Variables

Foreign tourist arrival:It refers to the number of arrival of tourists/ visitors and not to the number of persons. An individual who makes multiple trips to the country is counted each time as a new arrival.

Foreign visitors: A foreign visitor is any person visiting the country on a foreign passport whose main purpose of visit is other than the exercise of an activity remunerated from within the country or establishment of residence in the country.This definition covers two segments of visitors: "Tourists" and "Same day visitors".

Foreign tourists:

A foreign tourist is a person visiting India on a foreign passport, staying at least twenty-four hours in the country, the purpose of whose journey can be classified under one of the following headings:

- Leisure (recreation, holiday, health, study, religion and support)
- Business, family mission, meeting

The following are not regarded as "foreign tourists":

- Person arriving with or without a contract, to take up an occupation or engage in activities remunerated from within the country.
- Persons coming to establish residence in the country.

"Same day visitors" i.e., temporary visitors staying less than twenty-four hours in the country (including travellers on cruises).

Travel Receipts/ Foreign Exchange Earnings (FEE) from Tourism:

These are receipts of the country as a result of consumption expenditure, i.e., payments made for goods and services acquired, by foreign visitors in the economy out of foreign currency brought by them.

- Domestic Tourism:Residents of a given country travelling only within that country.
- Inbound Tourism:In relation to a given country non- residents travelling to that country.
- Outbound Tourism:In relation to a given country, residents travelling to another country.
- Internal Tourism:Domestic and inbound tourism.
- National Tourism:Domestic and outbound tourism.
- International Tourism:Inbound and outbound tourism.
- Visitors

All types of travelers engaged in tourism are described as visitors, and such term represents the basic concept for the whole system of tourism statistics.

International Visitors

Any person who travels to a country other than that of his / her usual residence, but outside his/ her usual environment, for a person not exceeding 12months and whose main purpose of visit is other than the exercise of an activity remunerated from within the country visited.

International Visitors Include:

- Tourist (overnight visitors):Visitors who stay at least one night in a collective or private accommodation in the country visited.

- Same day visitors:Visitors who do not spend a night in a collective or private accommodation in the country visited. This definition includes passengers of cruise ships who return to the ship every night to sleep on board even though the ship remains in port for several days. Also included in this group are, by extension, owners or passengers of yachts, and passengers on a group tour accommodated in a train.
- Domestic visitors:Any person residing in a country who travels to a place within the country, outside his/ her usual environment for a period not exceeding 12 months, and whose main purpose of visit is other than the exercise of any activity remunerated from within the place visited.

Capital investment:Capital investment in the tourism industry means the creation of capital or goods capable of producing other goods or services in tourism industry for earning higher profits in the private or public sector or regional revitalization and economic growth for public purposes.

Methodology: **Time series Econometric tests to assess the nature of the relationship between variables:**

Step – I: The Stationarity Test (Unit Root Test):
When we deal with time series (TS) data, we must keep in mind various econometric issues which may influence the estimated OLS parameters. We may end up with very high R^2 while regressing a TS variable with other TS variables though there may not exists any relationship between them. This is known as spurious regression. Hence, before going for testing for co-integration and ganger causality test, we must check the stationary property individually for the TS variables. By stationarity of a time series variable (X_t), we mean that the concerned mean and its variance is not time dependent. Hence, we may say that a stochastic variable would be stationary if the mean [E (X_t)] and the variance [var (X_t)] of X remain constant over time and the covariance [cov (X_t, X_s)] will be zero for t is not equal to s.
To test the stationary of the variables, we use the Augmented Dickey Fuller (ADF) test & Phillips- Perron Unit Root Test.
    1) Augmented Dickey Fuller (ADF) test:
In general, ADF tests, is widely used for testing unit root. To test the stationarity of a time series data, we have to consider the following equation
$$\Delta X_t = \beta_1 + \beta_2 t + \alpha X_{t-1} + \gamma \Sigma \Delta X_{t-1} + \varepsilon_t \qquad (1)$$
Where, the white noise error term is presented by ε_t. To check the stationarity of the variable, we should consider the null hypothesis as the variable has unit root. Now, to check the presence of unit root, we have to test the coefficient of one period lag of X. Now, if the value of $\boldsymbol{\alpha}$ is non-zero in general and negative in particular and is statistically significant then we can reject the null hypothesis of unit root test.
Test of unit root can be done in two ways: with intercept only and with intercept and trend. When Intercept & trend is considered then we have to go for trend stationarity of the series.
    2) Phillips- Perron Unit Root Test:
PP unit root test ignores the problems related to heteroskedasticity and autocorrelation in the disturbance term. The test regression for the PP tests is
$$\Delta X_t = \beta' D_t + \pi X_{t-1} + u_t \qquad (2)$$

Where, u_t is integrated of order zero. The test is conducted on the coefficient of one period lag of X. Thus, the null hypothesis of unit root is, H_0: $\pi = 0$. The test-statistics followed by PP test follows the same asymptotic 't' distributions as the ADF test follows. Now, there are two advantages in using PP-test as compared to the ADF test. The first one is that the PP test

gives robust result in the presence of heteroskedasticity. The second one is the lag specification is not required for the PP test.

In this regard, when the number of unit root is determined, we have to proceed to the Johansen's co- integration test. It postulates number of appropriate lags used in estimation since the choice of lag length is crucial in the Johansen procedure. In selection of appropriate lag length, standard literature follows either Akaike Information Criteria (AIC) or Bayesian Information Criteria (BIC) which is also known as Schwarz Information Criteria (SIC) or both. In our study, the appropriate lag length is selected on the basis of Schwarz Information Criteria (SIC) as we are more interested to identify the true model rather than to find out the best approximating model to the unknown data generating process which AIC actually gives (Henry de-Graft Acquah, 2009). Another reason is that, AIC indirectly depends on sample size.

Now, if there is no co- integrating vector in the model then one can proceed to the Vector auto regression technique. Now if any user has found any co- integrated relationship, then via co- integration framework the analysis can be done, the analysis continues in a co- integration framework.

Step – II: The Cointegration Test

Engle and Granger (1987) have postulates that if the linear combinations of non-stationary variables are stationary then we can regress on non-stationary variables. In this backdrop, test suggested by Johansen and Juselius (1990) is very useful to find long-run relationship between non-stationary variables in a multivariate regression framework. We can estimate the Johansen and Juselius test by the following manner:

Let us assume, from a sample of T; a (n×1) vector is X_t and X_t is followed by first order of integration [I (1)]. Now, we have to estimate the VECM i.e., vector error correction model to obtain the number of co- integrating vector. Equation (3), presents the structure of VECM:

$$\Delta X_t = A_0 + \prod X_{t-p} + \sum_{i=1}^{p-1} A_i \Delta X_{t-i} + \varepsilon_t \qquad (3)$$

In equation (3), the vector ΔX_t follows the process of integration of order zero, whereas, the vector ΔX_{t-I} follows integration of order one process. Hence, rank of Π matrix determines the long run equilibrium relationship among X_t. Now, if the rank (r) is zero for Π matrix then from equation (3) we can say that in I(0), there is no co- integration relationship between variables. In this case, equation (3) also reduced to a pth order VAR model.

Now, if the rank of the Π matrix is greater than 'zero' and less than 'n' i.e., 0< r <n then there will be (n × r) matrices of α and β such that
$$\prod = \alpha\beta' \qquad (4)$$

Here β implies the co- integrating vector; therefore, $\beta'X_t$ follows the I(0) process although X_t are integrated of order one and α's measured the strength of co- integration relationship. In this framework, through maximum likelihood procedures we have estimate (A0, A1, . . .,A$_{p-1}$, Π, Ω), in a way where 'Π' can be written as presented in equation (4).

Now, we have to follow two-step procedures to estimate the above-mentioned parameters. First, we have to regress $\Delta \mathbf{X}_t$ on $\Delta \mathbf{X}_{t-1}$, . . .,$\Delta \mathbf{X}_{t-p+1}$ and obtain the residuals u$_t$. In the second step, regress $\mathbf{X}_{t-1}$ on $\Delta \mathbf{X}_{t-1}$, $\Delta \mathbf{X}_{t-2}$, . . .,$\Delta \mathbf{X}_{t-p+1}$ and obtain the residuals $\hat{e}_t$. From the obtained residuals '$\hat{u}_t$' and '$\hat{e}_t$,' find the variance–covariance matrices.

$$\hat{\Sigma}_{uu} = \left(\frac{1}{T}\right)\sum_{t=1}^{T}\hat{u}_t\hat{u}_t' \tag{5}$$

$$\hat{\Sigma}_{ee} = \left(\frac{1}{T}\right)\sum_{t=1}^{T}\hat{e}_t\hat{e}_t' \tag{6}$$

$$\hat{\Sigma}_{ue} = \left(\frac{1}{T}\right)\sum_{t=1}^{T}\hat{u}_t\hat{e}_t' \tag{7}$$

The maximum likelihood estimator of 'β' can be obtained by solving:

$$|\lambda\hat{\Sigma}_{ee} - \hat{\Sigma}_{eu}\,INV(\hat{\Sigma}_{uu})\hat{\Sigma}_{ue}| = 0 \tag{8}$$

With the eigen values $\hat{\lambda}_1 > \hat{\lambda}_2 > ..... > \hat{\lambda}n$. The normalized co- integrating vectors are: $\hat{\beta} = (\hat{\beta}_1, \hat{\beta}_2, ... \hat{\beta}_n)$, Such that $\hat{\beta}'\hat{\Sigma}_{ee}\hat{\beta} = I$

Now we can test the null hypothesis that r = h, $0 \leq h < n$ against the alternative of r = n by obtaining the following statistics:

$\lambda_{trace} = L_A - L_O$

Where

$$L_O = -\left(\frac{Tn}{2}\right)\log(2\Pi) - \left(\frac{Tn}{2}\right) - \left(\frac{T}{2}\right)\log|\hat{\Sigma}_{uu}| - \left(\frac{T}{2}\right)\sum_{i=1}^{h}\log(1-\hat{\lambda}_i) \tag{9}$$

and

$$L_A = -\left(\frac{Tn}{2}\right)\log(2\Pi) - \left(\frac{Tn}{2}\right) - \left(\frac{T}{2}\right)\log|\hat{\Sigma}_{uu}| - \left(\frac{T}{2}\right)\sum_{i=1}^{n}\log(1-\hat{\lambda}_i) \tag{10}$$

Hence, $L_A - L_O = -(T/2)\sum_{i=h+1}^{n}\log(1-\hat{\lambda}_i)$

$$2(L_A - L_O) = -T\sum_{i=r+1}^{n}\log(1-\hat{\lambda}_i) \tag{11}$$

Equation (11) follows χ^2 distribution and called as trace statistics. Further, the null hypothesis that there is r against r + 1 co- integrating vectors can be tested by obtaining the following statistic:

$$\lambda_{max} = -T\log(1-\hat{\lambda}_{r+1}) \tag{12}$$

Step – III: Granger Causality test:

The granger causality tests are performed to establish the direction of dynamic (short- run) relationship among the variables. Granger causality says "if X causes Y, then changes in X should precede changes in Y. In particular, to say that X causes Y, two conditions should be met. First, X should help to predict Y; i.e. in a regression of Y against past values of Y, the addition of past values of X as independent variables should contribute significantly to the explanatory power of the regression. Second, Y should not help to predict X, it is likely that one or other variables are in fact causing the observed changes in both X and Y".

Panel time series test

Levin Lin & Chu (2002), LLC, (based on 1992 work by Levin and Lin) considered a two-way fixed effect version of this model, which allows for a flexible common trend, which may pick up some cross-section dependence:

$$\Delta y_{it} = a_i + \alpha_t + by_{i,t\text{-}1} + \varepsilon_{it} \qquad\qquad (13)$$

and devised a test for the null H_0: b = 0, against the alternative b < 0. They also allow for serial correlation by augmenting with lagged changes. The assumption of homogeneity under the alternative, that b_i = b; is clearly restrictive and subject to the possible heterogeneity bias of the fixed effect estimator.

ImPesaran and Shin (2003), IPS, based on 1996 work, allow the b_i to differ under the alternative; under the null they are homogeneous, b_i = 0. They use the average ADF statistics (t ratios for b_i) and provide simulated test statistics for the mean and variance of the average t ratio, which allows testing of the hypothesis H_0: bi = 0, for all i: The alternative is that b1 < 0;b_K< 0; K ≤ N; some subsets are stationary, with K/N → k; as N→ ∞.

Now, LLC and IPS are the most popular as both of the tests are based on the ADF principle. However, LLC assumes homogeneity in the dynamics of the autoregressive coefficients for all panel members. In contrast, the IPS is more general in the sense that it allows for heterogeneity in these dynamics. Therefore, it is described as a "Heterogeneous Panel Unit Root Test". In addition, slope heterogeneity is more reasonable in the case where cross-country data is used. In this case, heterogeneity arises because of differences in economic conditions and degree of development in each country. As a result, the test developers have shown that this test has higher power than other tests in its class, including LLC. Hence IPS test is more preferred that LLC.

The next step is to test for co- integrating relationship. The concept of co- integration was first introduced into the literature by Granger (1987). Co- integration implies the existence of a long-run relationship between economic variables. The principle of testing for co-integration is to test whether two or more integrated variables deviate significantly from a certain relationship (Abadir and Taylor, 1999). In other words, if the variables are co-integrated, they move together over time so that short- term disturbances will be corrected in the long-term. This means that if, in the long-run, two or more series move closely together, the difference between them is constant. Otherwise, if two series are not co- integrated, they may wander arbitrarily far away from each other (Dickey et. al, 1981).

The shortcomings of traditional co- integration procedures led to the application of panel co-integration techniques. A heterogeneous panel co- integration test developed by Pedroni (2001) overcomes the problems of small samples and allows different individual cross-section effects for heterogeneity in the intercepts and slopes of the co- integrating equation.

Pedroni's method includes a group of tests for arguing the null hypothesis of no co-integration in heterogeneous panels. The first group of tests is termed "within dimension". It includes the panel-v, panel rho(r), which is similar to the Phillips, and Perron (1988) test, panel non-parametric (PP) and panel parametric (ADF) statistics. The panel non-parametric statistic and the panel parametric statistic are analogous to the single-equation ADF-test. The other group of tests is called "between dimensions". It is comparable to the group mean panel tests of Im et al. (1997). The "between dimensions" tests include four tests: group-rho, group-pp, and group-adf statistics. Hence Pedroni test establishes the long run relationship.

Time series analysis to assess the relation between economic growth via GDP and foreign tourist arrival (FTA), foreign exchange earnings (FEE) and capital investment (KI) for the Indian economy:

Here we have tried to estimate the relation between economic growth via GDP and foreign tourist arrival (FTA), foreign exchange earnings (FEE) and capital investment (KI) for India. To estimate the relation as discussed above, first we have to check the stationarity property.

On the relation between economic growth and foreign tourist arrival (FTA), foreign exchange earnings (FEE) and capital investment (KI) for Indian economy:

Table: 1

Panel A: Results from ADF Unit root test for variables with intercept				
Order of integration	Ln GDP	Ln FEE	Ln FTA	Ln KI
Level	1.441929	-0.775302	0.126224	-2.123349
1st difference	-3.487121**	-5.234295***	-3.459981***	-4.074754***
Panel B: Results from Phillips-Perron Unit Root Tests for variables with intercept				
Order of integration	Ln GDP	Ln FEE	Ln FTA	Ln KI
Level	1.197713	-0.785448	0.333607	-1.899815
1st difference	-3.463103**	-5.628838***	-3.533239**	-4.476159***

Source: Author's own estimation [*, ** and *** implies level of significance at 10%, 5% and 1% level respectively]

The result of ADF Unit Root Test is presented in panel A of Table 1. Each variable is tested in their level value and 1st difference with intercept only. It is found that all the variables i.e., Ln GDP (gross domestic product), Ln FEE (foreign exchange earnings), Ln FTA (foreign tourist arrival) and Ln KI (capital investment) are non- stationary at their level values i.e., they have unit roots at their level value. But they are stationary at their 1st difference i.e., at I (1) there is no unit root.

The result of Phillips- Perron unit root test is presented in panel B of table 1. Each variable is tested in their level value and 1st difference with intercept only. It is found that all the variables i.e., Ln GDP (gross domestic product), Ln FEE (foreign exchange earnings), Ln FTA (foreign tourist arrival)and Ln KI (capital investment) are non- stationary at their level values i.e., they have unit roots at their level value. But they are stationary at their 1st difference i.e., at I (1) there is no unit root.

Results from Johansen Co- integration test (JCT):

Having established the time series properties of the data, the test for the presence of long- run relationship between the variables using the Johansen Co- integration test is conducted. The Johansen approach can determine the number of co- integration vectors for any given number of non- stationary variables of the same order. The result as given in table 3 suggests that the null hypothesis of no co- integration vectors can be rejected at 1% level of significance. It can be seen from the trace statistics that we have four cointegrating equations at 5% level and two cointegrating equations at 1% level.

Hypothesized		Trace	5 Percent	1 Percent
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Critical Value
None **	0.852179	96.34905	54.64	61.24
At most 1 **	0.714094	50.46699	34.55	40.49

At most 2 *	0.453091	20.41678	18.17	23.46
At most 3 *	0.219036	5.933415	3.74	6.40
Trace test indicates 4 cointegrating equation(s) at the 5% level				
Trace test indicates 2 cointegrating equation(s) at the 1% level				
*(**) denotes rejection of the hypothesis at the 5%(1%) level				

Table 2: Johansen Co- integration test result

Source: Author's own estimation

From the cointegration result, the 1st normalized co- integration equation can be written as:

Normalized cointegrating coefficients (standard error in parentheses)

LnGDP	LnKI	LnFEE	LnFTA
1.000000	0.001566	0.006554	0.009056
	(0.000709)	(0.000836)	(0.000631)
	[2.209***]	[7.84***]	[14.3518***]

Source: Author's own estimation

From the above normalized co- integration equation, we can say that there is a positive and significant relationship between Ln KI and Ln GDP. One unit change in capital investment in the tourism sector leads to 0.0016 units change in India's GDP. So far as the relationship between Ln GDP and Ln FEE is concerned, we found a positive and significant relationship between them. One unit change in Ln FEE, leads to 0.007 units change in India's GDP.

The relationship between Ln FTA and Ln GDP is positive and significant. One unit change in the Ln FTA leads to 0.009 units change in India's GDP.Now, from the above co- integration result, we can say that there is a long run relationship between the variables that are taken up in our study.

GRANGER CAUSALITY

The findings of Granger causality can be found out from the following tables:

Causality between economic growth and foreign tourist arrival (FTA), foreign exchange earnings (FEE), and capital investment (KI) for Indian economy:

Table 3: Causality test result

Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
LNKI does not Granger Cause LNGDP	25	2.96818	0.0469
LNGDP does not Granger Cause LNKI		2.29546	0.1440
LNFEE does not Granger Cause LNGDP	25	2.99085	0.0977
LNGDP does not Granger Cause LNFEE		8.79837	0.0071

LNFTA does not Granger Cause LNGDP	25	3.58780	0.0714
LNGDP does not Granger Cause LNFTA		0.18520	0.0711

Lags: 2

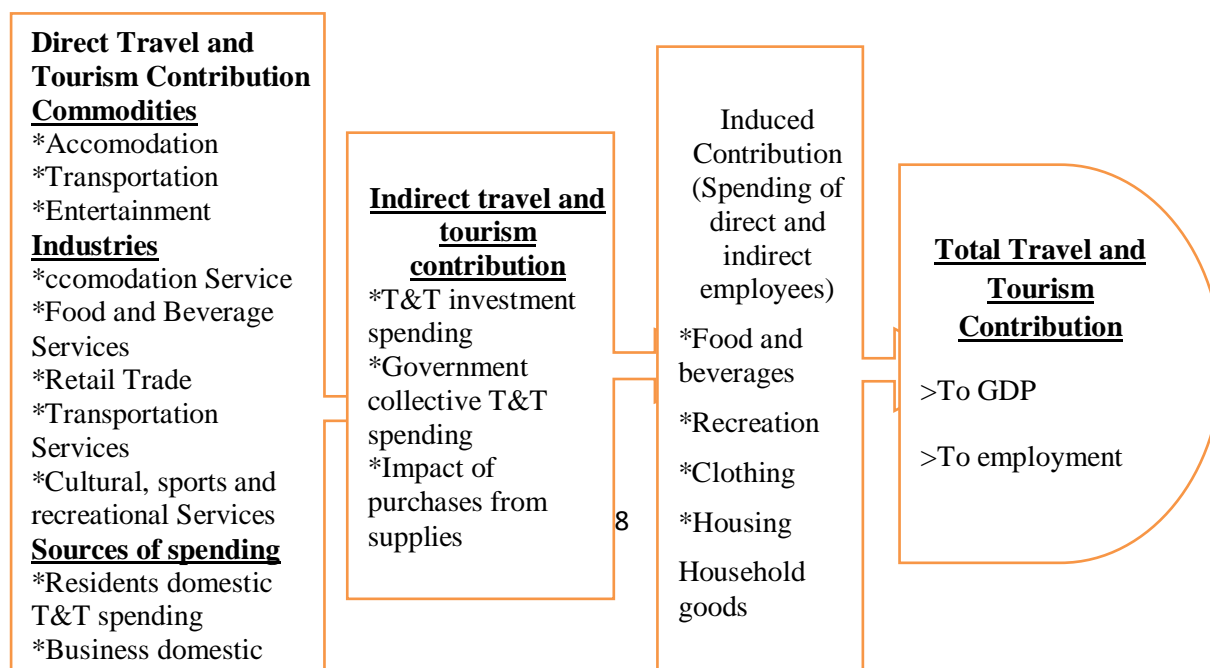| Null Hypothesis:	Obs	F-Statistic	Prob.
LNKI does not Granger Cause LNGDP	24	7.69821	0.0096
LNGDP does not Granger Cause LNKI		1.76590	0.1980
LNFTA does not Granger Cause LNGDP	24	4.27385	0.0634
LNGDP does not Granger Cause LNFTA		10.7764	0.0007
LNFEE does not Granger Cause LNGDP	24	6.23301	0.0083
LNGDP does not Granger Cause LNFEE		0.86087	0.0486

Author's own estimation

From the above results on Granger causality test, we can say that, there exists a unidirectional and causal relationship between LnKI (capital investment) and LnGDP (gross domestic product). The direction of causality flows from LnKI to LnGDP at Lags 1 and 2. So far as the causal relationship between Ln FTA(foreign tourist arrival) and LnGDP is concerned, we found a bidirectional and causal relationship at lag 1 and 2. Now, by considering the causal relationship between LnFEE and LnGDP, we found that a unidirectional and causal relationship exists between them at lag 1 and 2. The direction of causality is from LnFEE to LnGDP.

Relation between GDP and Employment

In an economy, employment plays a vital role in the economic growth via GDP of a country. Several studies have tried to prove this phenomenon. In this regard, the present study also tries to establish the relationship between economic growth in India and the employment generated in its travel and tourism sector. The following figure shows how travel and tourism sector can flourish an economy's GDP and employment through direct, indirect and induced effect.

Table 4: Direct, indirect and induced effect of GDP and employment in an economy coming from travel and tourism sector

Direct Travel and Tourism Contribution
Commodities
*Accomodation
*Transportation
*Entertainment
Industries
*ccomodation Service
*Food and Beverage Services
*Retail Trade
*Transportation Services
*Cultural, sports and recreational Services
Sources of spending
*Residents domestic T&T spending
*Business domestic

Indirect travel and tourism contribution
*T&T investment spending
*Government collective T&T spending
*Impact of purchases from supplies

Induced Contribution (Spending of direct and indirect employees)
*Food and beverages
*Recreation
*Clothing
*Housing
Household goods

Total Travel and Tourism Contribution
>To GDP
>To employment

8

Here we have tried to estimate the relation between economic growth via GDP and employment in India. To estimate the relation as discussed above, first we have to check the stationarity property

Table 5

Panel A: Relation between economic growth via GDP and employment (ADF Unit Root Tests)			Panel B: Results from Phillips- Perron Unit Root Tests for variables with intercept		
Order of integration	Ln GDP	Ln employment	Order of integration	Ln GDP	Ln employment
Level	1.441929	-0.316291	Level	1.197713	-0.307361
1st difference	-3.487121**	-4.861601***	1st difference	-3.463103**	-4.943850***

Source: Author's own estimation [*, ** and *** implies level of significance at 10%, 5% and 1% level respectively]

The results of ADF Unit Root Test is presented in panel A of the above table. Each variable is tested in their level value and 1st difference with intercept only. It is found that all the variables i.e., Ln GDP (gross domestic product) and Ln employment are non- stationary at their level values i.e., they have unit roots at their level value. But they are stationary at their 1st difference i.e., at I (1) there is no unit root.

The result of Phillips- Perron unit root test is presented in panel B. Each variable is tested in their level value and 1st difference with intercept only. It is found that all the variables i.e., Ln GDP and Ln employment are non- stationary at their level values i.e., they have unit roots at their level value. But they are stationary at their 1st difference i.e., at I (1) there is no unit root.

Results from Johansen Co- integration test (JCT):

Having established the time series properties of the data, the test for presence of long- run relationship between the variables using the Johansen Co- integration test is conducted. The Johansen approach can determine the number of co- integration vectors for any given number of non- stationary variables of the same order. The result as given in table 14 suggests that the null hypothesis of no co- integration vectors can be rejected at 1% level of significance. It can be seen from the trace statistics that we have two cointegrating equations at 5% level and no cointegration at 1% level.

Table 6: Johansen Co- integration test result

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None *	0.507430	21.88127	18.17	23.46
At most 1 *	0.184211	4.886401	3.74	6.40
Trace test indicates 2 cointegrating equation(s) at the 5% level				
Trace test indicates no cointegration at the 1% level				
*(**) denotes rejection of the hypothesis at the 5%(1%) level				

Source: Author's own estimation

From the cointegration result, the 1st normalized cointegration equation can bewritten as:

Table7: Normalized co- integration equation

1 Cointegrating Equation(s): Log likelihood   105.4444

Normalized cointegrating coefficients (standard error in parentheses)

LNGDP	LNEMP
1.000000	0.004121
	(0.00051)
	[8.08***]

Source: Author's own estimation

From the above normalized co- integration equation, we can say that there is a positive and significant relationship between LnGDP (gross domestic product) and LnEMP (employment). One unit change in employment in the tourism sector leads to 0.004 units change in India's GDP.

Now, from the above co- integration result, we can say that there is a long run relationship between the variables that are taken up in our study.

Granger Causality

The findings of Granger causality can be found out from the following tables:

Table 8: Causality between economic growth via GDP and employment:

Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
LNEMP does not Granger Cause LNGDP	25	6.34502	0.0195
LNGDP does not Granger Cause LNEMP		2.99085	0.1177

Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
LNEMP does not Granger Cause LNGDP	24	4.53764	0.0245
LNGDP does not Granger Cause LNEMP		0.86087	0.4386

Source: Author's own estimation

From the above results on Granger causality test, we can say that, there exists a unidirectional and causal relationship between Ln EMP (employment) and Ln GDP (gross domestic product). The direction of causality is from Ln EMP to LnGDP.

5. Summary of Our Study
We can summarize the study in the following way:
- There is a positive and significant relationship between economic growth (GDP) and Travel and tourism in India.

- There is a positive and significant relationship between economic growth (GDP) and employment in the Travel & Tourism Sector of India.
- For Indian economy, there exists a unidirectional and causal relationship between LnKI (capital investment) and LnGDP (gross domestic product). We also found a bidirectional and causal relationship exists at lag 1 and 2 for Ln FTA (Foreign Tourist Arrival) and LnGDP. BetweenLnFEE and LnGDP, we found that a unidirectional and causal relationship exists between them at lag 1 and 2. The direction of causality is from LnFEE to LnGDP.
- There exists a unidirectional and causal relationship between Ln EMP (employment) and Ln GDP (gross domestic product). The direction of causality is from Ln EMP to LnGDP.

Problems That Exist in Tourism Industry:
Tourism industry is a big foreign exchange earner in India, yet the industry still is hampered by several problems like (for Indian case):
  o Poor transportation
  o Lack of basic hygienic amenities at halting points
  o Non-standardization or un uniformity of rates and fares
  o Poor maintenance of heritages
  o Issues regarding security and harassment
  o Lack of passionate and trained professionals
  o Costly travel – soaring fuel surcharges, poor flight management etc
  o Lack of supportive infrastructure – bad roads, improper health and hygiene, communication gaps, etc
  o Gap between demand and supply of manpower
  o Lapses in security and safety – incidents of tout and harassment of tourists in some places
  o Uneven progress – slow growth of village tourism, lack of information about tourist profile etc
  o Non-Implementation of Legislative Law.
  o Excessive formalities for an issue of special permit to view restricted areas sites.
  o Untrained Guides.
  o Tourism development projects are usually developed by Indian Government without any discussion with community leaders and they are dumped to follow the ineffective projects blindly.
  o Poor Administration & management.
  o Absence of alternate site nearby and fair and festival creates a bottleneck problem in crowd management. Like In KumbhMela, no effective remedies are applied by Indian Government to curtail overcrowd by creating other destinations in nearby localities.
  o Involvement of too many agents and tourism operators also makes the cost of tourism package too high in India.
  o Lack of entrepreneurship opportunities also restrict youth to follow a career in tourism such as opening a hotel resort or retail outlet or handicraft business to serve Tourism Industry in India.
  o Indian politicians are the hindrances in the development of tourism in India; their policies directly can influence the tourism.

6. Conclusions

Tourism is one of the three leading "socio-economic and service businesses" of the new century and "Promotion, Publicity & Marketing" play a vital role in the growth and development of Tourism. From the estimation of the impact of tourism industry for the boosting of economic growth and employment generation in India in the liberalized era we may reach at several conclusions. The results indicate that, there is a positive and significant relationship between economic growth (GDP) and Travel and tourism in India. It is also found that, there is a positive and significant relationship between economic growth (GDP) and employment in the Travel &Tourism Sector in India. There exists a unidirectional and causal relationship between capital investment and gross domestic product. We also found a bidirectional and causal relationship at lag 1 and 2 for Foreign Tourist Arrival and GDP. The results alsoreveal that, there exists a unidirectional and causal relationship between employment and GDP. Though there are so many deficiencies with the tourism sector in India but there are also some opportunities. In India, like a developing country a large section of the labour force remain unemployed or work in irregular basis which is the burden of any economy. With the flourish of this sector may absorb a large share of labour force. With the development of tourism sector, it is very much needed to protect heritage of our country so that the foreign tourists may attract by the ancient heritage**.**

For designing an aggressive and powerful marketing strategy and to create an effective marketing plan of action, availability of tourist information through various media is absolutely essential. Publication of good quality brochures, posters, picture post-cards etc., and their distribution through various outlets of State Tourism Departments including Government of India Tourist offices and other meansare equally important. Advertisements in leading journals of Airlines, travel agents, within the country and abroad, production of short films and screening at important locations, conduct of press meets and familiarization of tours for leading domestic and foreign travel writers. Organising road shows and trade fairs and exhibitions at important centres, participation in tourist-marts within the country and abroad would be strategically used to market various tourist destinations.

A focused, integrated and holistic publicity and marketing campaign therefore, can be an important element of the strategy for promoting tourism.

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