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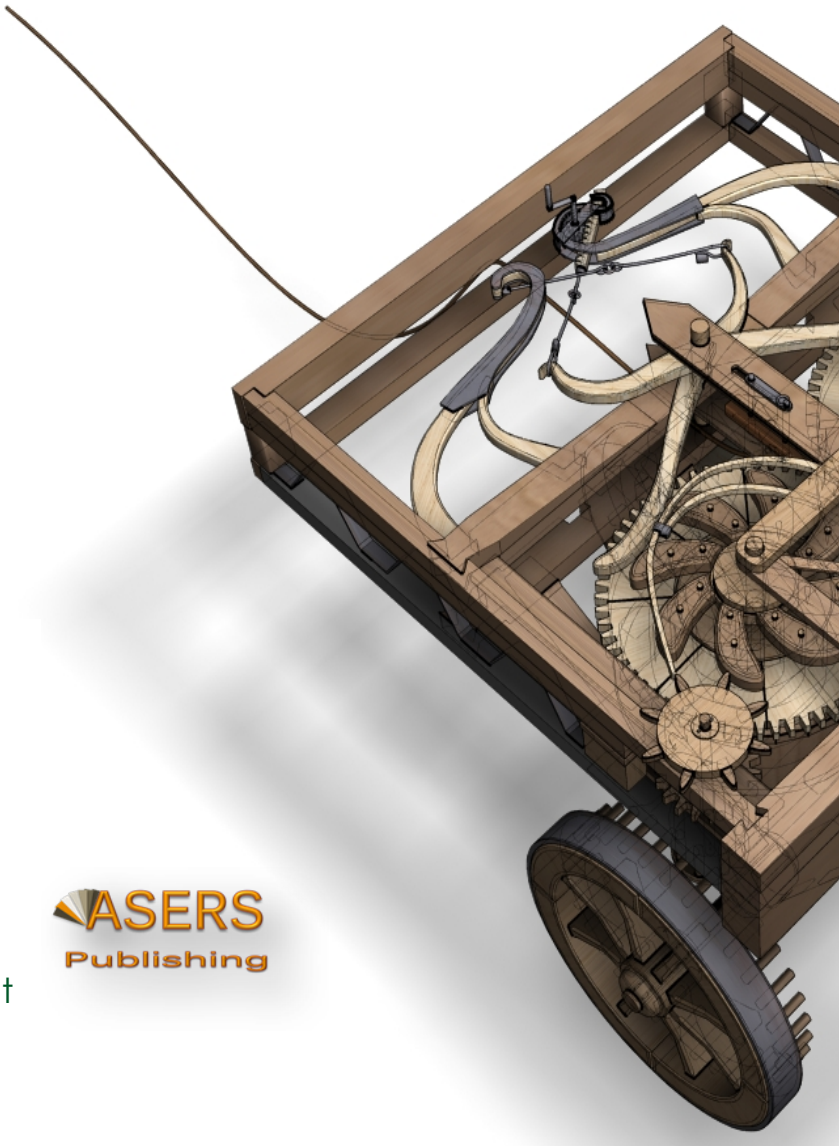

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Socio-Economic Impacts of Tourism in India: An Empirical Analysis

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Abstract:

The importance of tourism as an instrument for economic growth and employment generation, particularly in remote and backward areas, has been well recognized world over. It is the largest service industry globally in terms of gross revenue as well as foreign exchange earnings. Tourism plays an effective role in achieving growth with equity objectives which we have set for ourselves. The extant tourism literature suggests that the expansion on tourism sector can contribute to long-run macroeconomic performance of developing countries. India ving high potential for the expansion of tourism industry can be a catalyst for the long-run socio-economic growth.

Thus, we have investigated the impact of tourism on India's economic growth over a period from 1990 to 2015. The results predict the possibility of long-run equilibrium relationship between tourism and economic growth. This justifies for the identification of the indicators which should be emphasized while formulating plans and policies for tourism sector expansion. The estimation of long-run regression model suggests that the indicators such as foreign exchange earnings, international tourists spending, domestic expenditure on tourism and capital investment by all industries related to travel and tourism are critical in making tourism industry an engine of economic growth.

Keywords: tourism, impact, India, economic growth, fully modified ordinary least square (FMOLS).

JEL Classification: O44, Z32.

Introduction

In recent years, tourism has become a leading industry in the service sector at the global level as well as a major job provider and foreign exchange earner at the national level. Tourism is one of the largest economic activities of the world (Bigano *et al*. 2007). The existing literature, in general, provides the evidence in support of the notion that tourism promotes economic growth (Balaguer and Cantavella-Jorda 2002, Dristakis 2004, Gunduz and Hatemi-J 2005, Ongan and Demiroz 2005, Oh 2005, Kim *et al*. 2006, Katircioglu 2009, Belloumi 2010). Tourism is often considered as a solution to the macroeconomic problems, as an engine for social transformation (Khaled 2009), and as a producer of good image on the global platform (Edgardo 2005, Imran *et al*. 2010, Jamieson 2000). Algieri (2006) observed that the countries specialized in tourism register good economic performances. And, India is such a country in Asian continent which has been well known world over for its tourism sector. There is no other

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country in the world which offers wide choice in tourism like India such as historical tourism, adventure tourism, medical tourism, spiritual tourism, beach tourism, sports tourism, rural tourism, tribal tourism, etc. (Gupta and Gupta 2008). The expansion in tourism over years has been acting as an engine, and an important determinant of overall sustainable growth in India (Kaur and Sharma 2015).

Today, tourism represents one of the most dynamic economic sectors in the world (Edgardo 2005). The tourism literature well recognised the role of tourism industry in generating both economic and social impacts on the macroeconomic activity of an economy. In the economic front, tourism contributes to national income and thus, helps enhancing regional growth (Proenca and Soukiazis 2008) and augmenting the standard of living of masses. Tourism is not only one of the contributors to GDP, but also is an important contributor to value added (Minciu 2000). Besides the contribution to GDP, tourism also leads to development through its impact on employment, enhancement of infrastructures, generation of income taxes, exports, profits and acceleration of global peace (Idowu 2008, Chi 2005). This also adds to income generation and increased quality of life (Edgardo 2005, Craig and Stanislay 2007, Nanthakumar *et al*. 2008).

Its importance to employment is strengthened by the relatively labour-intensive nature of tourism and the limited substitution of capital in the production of tourism services (Sahu and Chavali 2008). The importance of tourism, as an instrument of economic development and employment generation, particularly in remote and backward areas, has been well recognized (Proenca and Soukiazis 2008).

Tourism also helps in solving balance of payments problems in less developed economies by earning foreign exchanges through inbound tourism (Edgardo 2005, Craig and Stanislay 2007, Nanthakumar *et al*. 2008). Tourism increases local revenues and budget deficits can also benefit from increased tax revenues (Cortes and Pulina 2006, Balaguer and Cantavella 2002). Apart from this, tourism expenditure by foreign tourists can enhance domestic tourism construction as well as bring about an accumulation of physical and human capital (Lee and Chang 2008).

Tourism expansion also increases the demand for goods and services including lodging, restaurants, amusements, retail trade and transportation facilities (Eugenio, Morales and Scarpa 2004). Syahida (2003) also agreed that tourism can create needed jobs for residence, generate needed funds to improve the lives of local people and increase business for local merchants in small coastal town seeking economic security. Tourism has the potential of enhancing efficiency through increased competition among firms and local crafts for international tourism destinations and it facilitates the exploitation of economies of scale in local firms (Balaguer and Cantavella 2000). Samina (2010) found that tourism led to a growth of household incomes and government revenue directly and indirectly by means of multiplier effects, improving balance of payments and provoking tourism-promoted government policies. Mazumder *et al*. (2011) observed that tourism industry not only creates high multiplier effects, but also steps up the inter-sectoral linkages in the economy.

On the other hand, the most important social impact of tourism is the improvement in quality of life of people which may be termed as social development. At the macro level the most accepted definition of social development converges around the concepts of improving the human well-being, promoting higher standards of living of masses, increasing employment and creating conditions of economic and social progress. Therefore, the most accepted indicator of measuring social impact of tourism is employment (ESCAP 2007). Tourism by creating employment opportunities for both skilled and unskilled labour force, contributes to the macroeconomic activity in an economy. Employment has well been recognised as the most important driver of improvement in well-being. Employment by increasing the disposable income of people helps them to improve their consumption standards and adopt a better consumption pattern that may lead to improved quality of life. Therefore, literature supports to a significant relationship between tourism and overall growth of an economy (Sara and Elias 2008). It is with this backdrop, the objective of this paper is to assess the socio-economic impacts of tourism in India in a macroeconomic framework. The rest of the paper is organised as follows: Section 2 discusses the data and methodology of the study; Section 3 makes the analysis; and Section 4 concludes.

1. Data and methodology

Since the primary objective of the study is investigating the socio-economic impacts of tourism in India, we apply time series regression estimation procedure in a dynamic framework. We use GDP, PPP at constant 2011 International dollar as the dependent variable which acts as a proxy of economic growth and denoted by *EG*.

Then as independent variables we have considered a set of socio-economic indicators of tourism, viz., total contribution of travel and tourism to GDP (*TCG*), total contribution of travel & tourism to employment (*TCE)*, international tourist receipts (*ITR*), international tourist spending (*ITS*), domestic spending on travel and tourism (*DTS*), and capital investment by all industries directly involved in travel and tourism (*CIT*) in India. The variables

TCG, ITR, ITS, DTS, and CII are measured in terms of 2011 constant USD billions. All these variables are annual time series taken for the period 1990 to 2015. The data for GDP has been obtained from the World Development Indicators of World Bank database. The data on TCG, TCE, ITS, DTS and CII have been acquired from the World Travel and Tourism Council. The data on ITR is nothing but the foreign exchange earnings from inbound tourism and has been collected from the Ministry of Tourism, India. All the variables are taken in natural logarithms to avoid the likely problems of heteroscedasticity.

At the outset we have tested all the variables for stationary because the unit root property of the data set is crucial in case of time series analysis (Kaur and Sharma, 2015). In this study, we have used Augmented Dickey-Fuller (ADF) unit root test (Dickey and Fuller 1979, 1981). In the second step, we have examined the existence of the long-run equilibrium relationship between the variables of interest by using Johansen's cointegration test (Johansen 1988, 1989, 1991, 1995; Johansen and Jusellius 1990). Phillips (1991) has documented the desirability of this technique in terms of symmetry, unbiasedness and efficiency. But the cointegration test described above is unlikely to yield reliable results in the presence of the relatively short time series (Stolbov 2015).

The present study uses the time series over 26 years which is also a case of small series. In order to overcome this problem, Phillips and Hansen (1990) suggested the Fully Modified Ordinary Least Square (FMOLS) method of estimating the cointegrating regression to examine the elasticity of a dependent variable to change in explanatory variables in the long-run. In this study, we have used FMOLS method to estimate the following long-run relationship between tourism and economic growth of India:

$$EG_t = \beta_0 + \beta_{1t} TCG_t + \beta_{2t} TCE_t + \beta_{3t} ITR_t + \beta_{4t} ITS_t + \beta_{5t} DTS_t + \beta_{6t} CII_t + \varepsilon_t .$$

Here, it is expected that $\beta_I > 0$ which implies that all the explanatory variables representing tourism sector would have positive impacts on economic growth of India.

2. Empirical analysis

At the outset we have tested all the variables for stationary using Augmented Dickey - Fuller unit root test. The results are presented in Table 1. The results show that the null hypothesis of no unit roots for both the time series are rejected at their first differences since the ADF test statistic values are less than the critical values at 10%, 5% and 1% levels of significances. Thus, the variables are stationary and integrated of same order, *i.e.* I(1).

Table 1 - Results of Augmented Dickey-Fuller Unit Root Test

VARIABLES	Augmented Dickey-Fuller (ADF) Test Statistic			
	Level form with trend and intercept		First Difference form with trend and intercept	
EG	-2.754	1%: -4.374 5%: -3.603 10%: -3.238	-3.521	1%: -4.394 5%: -3.612 10%: -3.240
TCG	-2.877	1%: -4.374 5%: -3.603 10%: -3.238	-5.570	1%: -4.394 5%: -3.612 10%: -3.243
TCE	-3.103	1%: -4.374 5%: -3.603 10%: -3.238	-5.375	1%: -4.416 5%: -3.622 10%: -3.248
ITR	-2.138	1%: -4.394 5%: -3.612 10%: -3.243	-3.612	1%: -4.394 5%: -3.612 10%: -3.243
ITS	-2.622	1%: -4.374 5%: -3.603 10%: -3.238	-4.188	1%: -4.394 5%: -3.612 10%: -3.243
DTS	-2.539	1%: -4.374 5%: -3.603 10%: -3.238	-4.931	1%: -4.416 5%: -3.622 10%: -3.248
CII	-2.829	1%: -4.440 5%: -3.632 10%: -3.254	-6.446	1%: -4.394 5%: -3.612 10%: -3.243

Source: Authors' own estimation

In the second step, we have examined the existence of the long-run equilibrium relationship between the variables of interest by using Johansen's cointegration test. Since, Johansen's cointegration test is very sensitive to lag length, we initially estimated an unrestricted VAR in order to find an appropriate lag structure. The sequential modified Likelihood Ratio test (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SC) and Hannan-Quinn Information Criterion (HQ) have been used to select the number of lags required in the cointegration test. The results are presented in Table 2. The results indicate that the optimal lag length, based on these test statistics, is 1 lag. Then we applied VAR Lag Exclusion Wald Tests for conformity of the optimal lag length selection. The results are presented in Table 3. The p-value of joint hypothesis indicates that 1 is the optimal lag length.

Table 2 - VAR Lag Order Selection Criteria

Lag	logL	LR	FPE	AIC	SC	HQ
0	174.6715	NA	3.53e-15	-13.41372	-13.07243	-13.31906
1	344.1266	230.4590*	2.71e-19*	-23.05013*	-20.31985*	-22.29287*

Note: * indicates lag order selected by the criterion at 5% level
Source: Authors' own estimation

Table 3 - VAR Lag Exclusion Wald Tests

	EG	TCG	TCE	ITR	ITS	DTS	CII	Joint
Lag 1	23.044	16.552	24.338	48.485	36.784	29.834	8.861	1257.221
p-value	0.0016	0.0205	0.0009	0.0000	0.0000	0.0001	0.2628	0.0000
d.f	7	7	7	7	7	7	7	49

Source: Authors' own estimation

Now, with this optimal lag length we have estimated the VAR for Johansen's Trace and Maximum Eigen value tests of cointegration, and the results are summarized in Table 4. The Trace test indicates the existence of 4 cointegrating equations at 5% level of significance. And, the maximum Eigen value test makes the confirmation of this result. Thus, there exists the long-run equilibrium relationship between the variable representing tourism industry and economic growth in India.

Table 4 - 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*	0.992	324.111	150.55(0.000)	116.834	50.59(0.000)
At Most 1*	0.972	207.276	117.70(0.000)	86.1416	44.49(0.000)
At Most 2*	0.880	121.135	88.80(0.000)	51.0436	38.33(0.001)
At Most 3*	0.755	70.0914	63.87(0.013)	33.8178	32.11(0.030)

Note: *denotes rejection of the hypothesis at the 0.05 level
Source: Authors' own estimation

The cointegration test described above is unlikely to yield reliable results in the presence of the relatively short time series (Stolbov 2015). Thus, we have used FMOLS method to estimate the long-run relationship between tourism and economic growth of India. The results of the FMOLS estimation are presented in Table-5.

Table 5 - Results of Fully Modified Ordinary Least Square (FMOLS) Estimation

Dependent Variable: EG; Method of Estimation: Fully Modified Least Square (FMOLS)				
VARIABLE	Coefficient	Std. Error	t-Statistic	Prob.
TCG	1.4889	0.1126	83.212	0.0000
TCE	0.7266	0.0100	72.661	0.0000
ITR	0.4616	0.0463	9.961	0.0000
ITS	0.2600	0.0552	4.703	0.0002
DTS	1.3654	0.1003	13.611	0.0000
CII	0.0408	0.0116	3.498	0.0024
R-squared	0.9749	Mean dependent variable	8.1041	-
Adjusted R-squared	0.9683	S.D. dependent variable	0.4878	-
S.E. of regression	0.0868	Sum squared residual	0.1432	-
Long-run variance	0.0001	-	-	-

Source: Authors' own estimation

It is revealed from the FMOLS estimation that there is significant and positive long-run impact of tourism on economic growth in India. Precisely, the TCG, TCE, ITR, ITS, DTS and CII have power to explain the economic growth of the country. It is inferred from Table 5 that 10% increase in total contribution of travel and tourism to GDP in India can lead to about 14.88% increase in economic growth in the long-run. *Second*, 10% increase in total contribution of travel and tourism to employment in India can lead to about 7.26% increase in economic growth in the long-run. *Third*, 10% increase in international tourist receipts (foreign exchange earnings) can lead to 4.61% increase in economic growth. Fourth, 10% increase in international tourist spending in India can lead to 2.60% increase in economic growth. Fifth, 10% increase in domestic expenditure on travel and tourism in India can lead to 13.65% increase in economic growth. Furthermore, 10% increase in capital investment on travel and tourism in the country can lead to 0.41% increase in economic growth in the long-run. Overall, the FMOLS results provide the evidence in favour of '*tourism-led growth*' hypothesis in India in the long-run.

Conclusion

The objective of this paper was to investigate the impacts of tourism on economic growth of India. Using non-stationary time series variables over a period 1990 to 2015, we found a cointegrating or long-run equilibrium relationship between the indicators representing tourism sector expansion and macroeconomic growth of India. The results obtained from the assessment of socio-economic impacts of tourism through FMOLS show that tourism expansion in India has a positive and significant effect on macroeconomic growth of the country. This finding corroborates to the findings of earlier similar studies such as Tosun (1999) and Gunduz and Hatemi (2005) for Turkey, Balaguer and Cantavella-Jorda (2002) for Spain, Wu (2003) for china, Dritsakis (2004) for Greece, Oh (2005) for Korea, Chen, Liu and Xu (2006) for China, Chang *et al.* (2010) for 159 countries, Havi and Enu (2013) for Ghana, and Kaur and Sharma (2015) for India.

Hence, "promoting tourism via developing a long-term tourism strategic plan will contribute to economic growth in India". Thus, in India tourism sector expansion can be considered as an important determinant of macroeconomic growth of the country. The empirical evidence of the significant impact of tourism expansion on India's overall growth and development rationalises the necessity of promoting tourism industry through various campaigns that government of India has already launched such as Incredible India (2002), Athithi Devo Bahava (2009), Internal TV campaign in Europe (2010-11), and Clean India (2013). The recent year's tourism promotion schemes such as Tourists Visa on Arrival (2014), Incredible India mobile application for accessing tourism information (2014), National Mission on Pilgrimage Rejuvenation and Spiritual Augmentation Drive (2015), and Swadesh Darshan (2015) can go a long way not only to give a stimulation to the tourism industry, but can substantially contribute to the sustainable inclusive growth of India.

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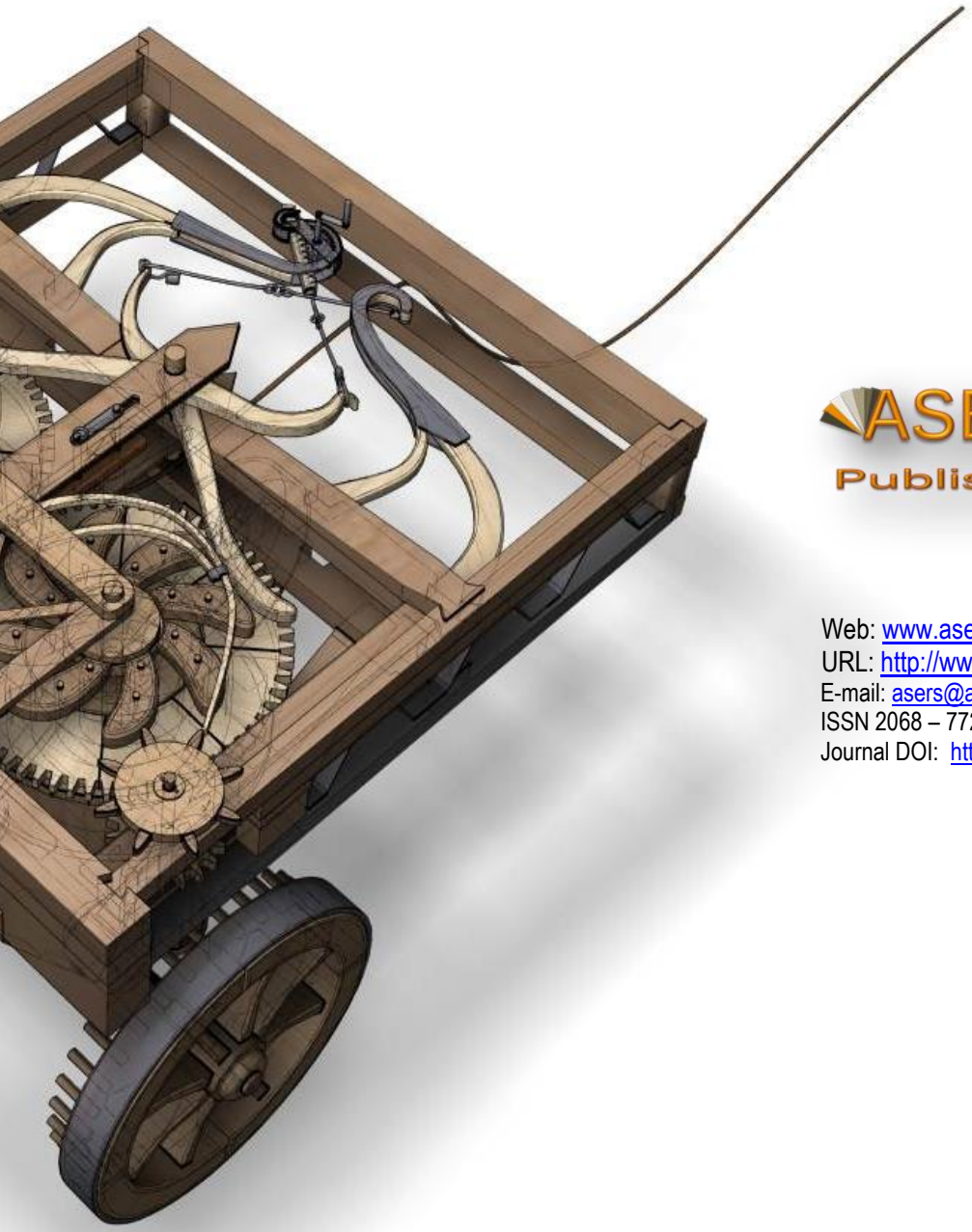

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