Tourism and Economic Growth in North East India

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Abstract

Tourism plays a vibrant role in enhancing the economy of a country. It is aroused by the natural longing of every human being for new experience, adventure, education and entertainment. The motivations for tourism also include social, religious and business interests and it ultimately contributes to economic development. In this connection the study attempts to analyse the growth of tourism inflow in North Eastern States of India since 2005 to 2016 and examines the relationship between tourism and economic growth. The relationship between tourism and economic growth is examined by using both fixed effect and random effect panel regression model and their results reveal that there is significant positive relation between tourism and economic growth. The study also reveals that there is a positive inflow of both domestic and foreign tourist in the states of (North East) NEIndia.

Keywords: Developing Region, Economic Growth, North East India, Panel Data, Tourism

JEL Code: O17, O18, C23

Introduction:

Tourism, which is emerging as a crucial sector of the world economy is now considered as the world's largest service industry. It makes a radical and significant impact on the world economic scenario. It has been well established over the world that tourism plays an important role in the economic development and employment generation, particularly in remote and backward areas. It has a great economic contribution in terms of both gross revenue as well as foreign exchange earnings. The number of worldwide

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international tourist arrivals has experienced consistent growth from 528 million in 1995 to almost 1.4 billion in 2018. Both the developing and developed countries are paying more attention to tourism by increasing their investment in this sector which results in tourism becoming one of the fastest-growing and most vibrant sectors in the world. Not only has tourism contributed 10.4 per cent of total global GDP but it has also contributed 10 per cent of total global employment in 2018 (World Travel and Tourism Council, 2019).

Tourism is also observed as a key instrument in India as it is one of the economic sectors in India that has the potential to grow at a high rate and can help in achieving a far-reaching economic growth. Tourism generated 8.1 per cent of India's GDP and supported 8.1 per cent of its total employment in 2018(World Travel and Tourism Council, 2019). Moreover, the Travel and Tourism Competitiveness Report 2019 ranked India 34th out of 140 countries overall. India's 5,000 years of history with its vast cultural and religious heritage and wide-ranging natural attractions make its tourism basket vast and varied. There has been a remarkable growth over the years in foreign tourist arrival to India due to the various efforts made, including promoting India through the "Incredible India" campaign in overseas markets. This global campaign has attracted the attention of tourism industry observers as well as tourists. Foreign tourist arrivals in India increased from 8.89 million in 2016 to 10 million in 2017. The foreign exchange earnings from the tourism sector in 2018 were over $ 28 billion, an increase of about $10 billion in 2013.

2. Necessity of the Study:

Tourism is one of the enormous service industries in India with its total contribution ofUSD240 billion to national GDP in 2018 from USD88.1 billion in 2007. Over 10 million foreign tourist arrivals were reported in 2017 with total foreign exchange earnings of over USD27.31 billion from tourism in the same year. North-East India is well blessed by nature and it occupies a core place among one of the world's richest bio-geographic areas. It is the

jewel house of various economic resources. It has an impressive cultural and ethnic heritage that attracts the tourists all over the world. Moreover, the wildlife sanctuaries at various places of NE India, the tea tourism and golf tourism of NE India can easily make it an attractive tourist-spot. Thus, NE India as a tourist destination exercises immense attraction from various angles. NE India is not only characterized by the blending of flora and fauna, it is also exceptionally rich in bio-diversity which helps in generating income and employment opportunities in NE India. In spite of being a very backward region in the whole country, its greatest potentiality to develop the region into a potent force through tourism industry can contribute a lot to the economic growth of the country. The Vision 2020 document released by Prime Minister Manmohan Singh in 2008 for the North-eastern region also earmarks infrastructure-led tourism development as one of the primary area for revenue generation. Thus, the Government is in an intenseeffort to promote tourism sector in NE India so as to attract more tourist inflows in the region. It is in this connection that the present study has attempted to analyse the trend of tourists' inflows in the NE India and its impact on the economic growth of the region.

3. Review of Related Literature

There are many literatures in tourism sector both at national, international and regional level. Some of these literatures important literatures been reviewed to throw light on the proposed study and these are mentioned below

A study conductedin Ghana during the period 1985 to 2010revealed that there is a long-run co-integration and a positive relationship between economic growth and tourism earnings in Ghana. Furthermore, the Granger causality test results revealed the presence of unidirectional causality from economic growth to tourism earnings in the country. Further the study suggests thatgovernment should focus on economic growth policies to promote

international tourism as a potential source of high tourism earnings in Ghana(Ahiawodzi, 2013).

Another study has examined the causality and long-run relationships between economic growth and tourism development in developing countries using P-VAR approach during 1995-2009. The findings reveal that there is a bilateral causality and positive long-run relationship between economic growth and tourism development. In other words, the tourism-led growth hypothesis is confirmed, as well as, output level which relates to economic well being and level of development is important in attracting tourists (Samimi et al, 2011).

There exists a link between tourism specialization and level of development. Econometric analysis also shows that tourism specialization is associated with higherrates of economic growth at relatively low levels of specialization but eventuallydiminishing returns set in and tourism's contribution becomes minimal. (Adamou and Sofronis, 2009).

Using the case study of Mombasa Resort Town a study was conducted to examine the issues surrounding sustainable tourism as a tool for local socioeconomicdevelopment in Kenya.Using primary data from field interviews and surveys in Mombasa, backedby secondary data, the study has revealed that due to the nature of the Kenyan tourism industry(external control and management of tourism establishments, limited local involvementand high leakage rates), the industry has not played an effective role in localsocio-economic development (Akama&Kieti, 2007).

3. Objectives:

Tourism plays a vibrant role in enhancing the economy of a country. It is aroused by the natural longing of every human being for new experience, adventure, education and entertainment. The motivations for tourism also include social, religious and business interests and it ultimately contributes to economic development by contributing higher return

to service sector. In this connection the study firstly, attempts to analyse the growth of tourism inflow in North Eastern States of India since 2005 to 2016 and finally, examines the relationship between tourism and economic growth.

4. Methodology of the Study

To analyze the growth of tourism in North East India over the mentioned period, least-squares growth rates estimation method is used. The least-squares growth rate is estimated by fitting a linear regression trend line to the logarithmic annual values of the variable in the relevant period. The regression equation takes the following form which is equivalent to the logarithmic transformation of the compound growth equation:

$$\ln X_t = \alpha + \beta t + e_t, \quad \text{………………………….. (1)} \quad \text{where t= 1,2,3,…………..12}$$

In this equation X is the variable growth which is to be estimated, t is time, α and β are parameters to be estimated. e_t indicates an error term where $e \sim N(0, \sigma^2)$. β is the average annual growth rate and it is multiplied by 100 for obtaining the rate into percentage.

To analyze the relationship between economic growth and tourism the following panel model is used

$$GSDP_{it} = \beta_0 + \beta_1 DT_{it} + \beta_2 FT_{it} + U_{it} \quad \text{……………………………………(2)}$$

Where, $GSDP_{it}$, DT_{it} and FT_{it} stand for gross domestic product at market price measured at base price, domestic tourist inflow and foreign tourist inflow of the ith state in t^{th} time. β_0, β_1 and β_2 are the parameters to be estimated. Here $u_{it} = \alpha_i + e_{it}$ indicates an error term which captures both cross-section and time variation.

This equation is estimated by taking GSDP as an indicator of economic growth and total number of domestic and foreign tourist inflows as measure of tourism in NE states of India. As the panel data model examines cross-sectional (group) and/or time-series (time) effects, a proper specification is necessary for model selection. These effects may be fixed and/or random. Fixed effects assume that individual group/time have different intercept in the

regression equation, while random effects hypothesize individual group/time have different disturbance terms. In order to determine the suitable model, Hausman test is conducted where the null hypothesis is that the preferred model is REM against the alternative FEM. It basically tests whether the unique errors are correlated with the regressors, the null hypothesis being they are not. If the Hausman test's Chi-square happens to be statistically significant, the FEM is considered better relative to the REM.

5. Findings and Analysis of the Study

The study reveals a significant positive growth of tourist inflow in NE states and also finds a significant contribution of tourism on economic growth. The detail findings of the study are discussed below sequentially according to the objectives of the study.

Table 1 shows average annual growth rate of domestic and foreign tourists along with GDP growth rate of NE region. The least square estimates for calculation of average annual growth rates reveal that average annual growth rate of foreign tourist (14.81 percent per annum) is almost double thedomestic tourist inflow (7.70 per cent per annum) during the study period. Over the study period the growth rate of tourist inflow in NE India issignificant and increasing at 7.87 per cent average annual growth rate. The significant coefficients of time for domestic tourists and foreign tourists indicate that inflows of these two groups of tourists are increasing over the time period.

The average annual growth rate of tourism, both domestic and foreign in different states of NE India is depicted in Table 2 which clearly shows that the growth of tourist inflows in all the states of NE are significant and increasing during the study period. Among the NE states, it is seen that the average annual growth rate of domestic tourists is highest in Arunachal Pradesh.Regarding foreign tourists though Arunachal Pradesh has again a high growth rate compared to other states of NE but the highest growth rate is in Tripura. Comparing the inflow of domestic tourists and foreign tourists in NE states, it is found that

the average annual growth of foreign tourists is much more than that of the domestic tourists in all the NE states except in Assam and Meghalaya.

Considering the growth of tourist inflows in NE states, Government of India has also sanctioned fund for new sites in NE India. Table 3 shows share of tourist spot and amount sanctioned by government under tenth and eleventh five years plan to NE states. The share of tourist spot sanctioned in NE India during last ten years (2002-2012) is 28.74 percent and fund sanctioned is almost proportionate to spot sanctioned. Nagaland, Sikkim and Tripura have attracted higher amount fund with higher number of newly sanctioned tourist spots compared to other NE states. Approximately 21 percent of the fund for development of tourism in India is allotted to these three states. While for other NE states viz; Assam, Meghalaya, Manipur and Arunachal Pradesh only 7 per cent of fund is sanctioned. However no new spot is sanctioned for Mizoram during tenth and eleventh five years plan.

Table 4 shows both Fixed Effect Model (FEM) and Random Effect Model (REM) and the estimates of both the models reveal that there exist significant positive relationship between tourist inflow and economic growth. Now, to decide between FEM and REM, Hausman test is done, the result of which is shown in table 5. Here, the Chi^2 is statistically significant at ten per cent level of significance which implies that FEM is relatively better than the REM.

In table 4, the R^2 between, within and overall of FEM suggest that approximately 54percent, 60 per cent and 54 per cent respectivelyof variation in GSDP is influenced by tourist inflow in NE states while the remaining part of the variation is explained by other factors. This is also reflected by the significant value of the constant term in the model. The model is significant indicating good fit for the variables. The F- statistics in fixed effect is also significant in explaining the relationship between economic growth and tourism.

Conclusion:

The study reveals significant positive growth of tourist inflows in NE states and there is significant contribution of tourism in economic growth. It is also found that average annual growth rate of foreign tourists' inflow is higher than inflow of domestic tourists during the study period. As the NE India has immense resource potential to develop tourism, so there should be a keen move to further boost more tourist inflows which in turn will promote the economic growth of the nation.

Table 1: Growth of Tourism in NE India during the period 2005 to 2016

Variables	Growth rates	Regression Result of the variables on time		
		Constant	Coefficient of Time	F Statistics
Inflow of Domestic Tourists	7.70	11.908* (37.37)	0.077* (1.78)	3.16*
Inflow of Foreign Tourists	14.81	7.29* (25.19)	0.148* (3.77)	14.18*
Total Inflow of Tourists	7.87	11.922* (37.65)	0.079* (1.83)	3.35*
GDP	7.93	9.090* (46.8006)	0.079* (3.01)	9.05*

Source: Authors Estimates from various issues of Statistical Handbook of NE states
*Note: The parenthesis denotes t statistics of the coefficients. * denotes coefficients are significant at less than one percent level of significance*

Table 2: Growth of Tourism in different states of NE India during the period 2005 – 2016

Variables	Growth Rates							
	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura
Inflow of Domestic Tourists	14.96*	5.94*	3.35*	6.67*	3.91*	12.98*	8.47*	5.27*
Inflow of Foreign Tourists	23.8*	5.16*	24.98*	5.92*	7.35*	14.13*	11.59*	25.55*
Total Inflow of Tourists	15.14*	5.94*	3.55*	6.66*	3.94*	13.05*	8.66*	6.02*
GDP	6.66*	5.88*	5.19*	6.16*	10.15*	6.81*	13.92*	8.64*

Source: Authors Estimates from various issues of Statistical Handbook of NE states
*Note: * denotes parameters are significant at less than one percent level of significance*

Table 3: State-wise Number of Tourism Sites and Amount Sanctioned for Promotion of Rural Tourism Projects, (2002-2007 and 2007-2012):

States	No. of Tourism Sites	Amount Sanctioned	Percentage share of spots	Percentage Share in Spending
Arunachal Pradesh	4	246.78	2.40	2.39
Assam	4	230.08	2.40	2.23
Manipur	4	162.39	2.40	1.57
Meghalaya	3	143.29	1.80	1.39
Nagaland	12	803.15	7.19	7.79
Sikkim	11	715.77	6.59	6.94
Tripura	10	625.95	5.99	6.07
North East India	48	2927.41	28.74	28.38
India	167	10316.48	100	100

Source: Authors Estimates from various issues of Statistical Handbook of NE states

Table 4: Estimates of the relation betweenEconomic Growth and Tourism

Model	LNGDP	Coefficient	Std Err	T Stat	Goodness of Fit		
Fixed-effects GLS regression	LNDT	0.44*	0.75	5.92	R^2	Between	0.542
	LNFT	0.17*	0.39	4.31		Within	0.627
	Constant	2.29**	0.85	2.71		Overall	0.548
	σ_u	0.66				F(2,86) = 72.38*	
	σ_e	0.19	(fraction of variance due to u_i)			Prob> F = 0.00	
	P	0.92					
Random-effects GLS regression	LNDT	0.44*	0.07	6.29	R^2	Between	0.544
	LNFT	0.16*	0.04	4.22		Within	0.627
	Constant	2.80*	0.74	3.74		Overall	0.550
	σ_u	0.62				Wald chi^2= 151.65*	
	σ_e	0.19	(fraction of variance due to u_i)			Prob> chi^2=0.00	
	P	0.91					

Source: Authors Estimates from various issues of Statistical Handbook of NE states
*Note: ** and * denotes parameters are significant at one percent and less than one percent level of significance*

Table 5: Hausman Test for FEM and REM

Variables	Coefficients of		Test Statistic
	Fixed Effect	Random Effect	Chi^2 = 4.65***
LNDT	.444	.441	Prob> Chi^2 = 0.10
LNFT	.166	.161	

Source: Authors Estimates from various issues of Statistical Handbook of NE states
*Note: *** denotes parameter is significant at tenpercent level of significance*

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