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A Study on Changes in GDP due to its Relative Dependence on Tourism Receipts

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Abstract

Tourism is a social phenomenon, driven by the natural urge of human beings to experience new places, cuisines, and destinations. The tourism industry being an established industry is considered as a vehicle for economic development. It is amongst the top ten sectors in India as it attracts a high level of foreign direct investment (FDI).The tourism industry has contributed a lot to the economy by attracting a large number of both foreign and domestic tourists travelling for professional as well as holiday purposes. This results in increased foreign exchange income and greater employment opportunities that stimulate the growth of tourism industry as well the overall economic growth.

This research is mainly directed towards finding out the contribution of tourism sector towards the GDP of the country and giving suggestions on ways to improve it further. The possibilities of improvement and increase of foreign cash inflow is a crucial part of tourism sector towards contributions to the economy. The researcher has used correlation and regression to establish the relationship as well as the influence of the tourism sector towards GDP and has found a positive impact, and this has been evident in all the countries. But if we compare the GDP contribution of the tourism sector from a world

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perspective, Indian tourism sector has not contributed enough to GDP. World average contribution from tourism sector towards GDP is 9.8%,but India's contribution towards GDP is 6.7%. This shows that there is huge opportunity in Indian tourism sector, and this huge opportunity has to be capitalized through government policies and reforms.

Keywords: Tourism, Tourism receipts, GDP, Tourism multiplier

Introduction

The human nature to know more and the thirst for new and challenging experiences with lesser communication barriers have promoted travel and tourism globally. Since time immemorial, various invaders and rulers have built luxurious and enchanting palaces and gardens and other marvellous and grand temples, forts and tombs which are of high historical value and those who remain great assets to the Indian tourism sector. In India, travel and tourism is an integral part of its culture and tradition. The unparalleled beauty of India's cultural heritage and its richness make India a tourists' paradise.

Although we say tourism became modern after independence, it took some time after the independence. India had some tourism activities before independence but tourism as a subject did not appear in the Constitution of India. Only some concepts regarding tourism have been mentioned in central and state lists.

There was no reference to tourism-related matters in the First Five Year Plans or any allocation of funds towards it or any development of tourist areas, but in the Second Five Year Plan Rs.3.36 crores was allocated for both central and state sectors put together. Second Five Year Plan focused mainly on important tourist facilities. But from the Third Five Year Plan till the current Five-Year Plan, the government has seen tourism as a main activity for the economy and government has allocated huge funds to the tourism sector and has established certain organizations to monitor the development of tourism sector in the country. Due to this effort by the government, tourism has been growing at a significant rate and has been highly contributing to the GDP.

The tourism industry has contributed a lot to the economy by attracting a large number of both foreign and domestic tourists travelling for professional as well as holiday purpose. This results in increased foreign exchange income and greater employment opportunities that stimulate the growth of the tourism industry as well the overall economic growth.

Literature Review

Jacques Rogozinski (1980) in his study stated that Tourism has helped increase the transportation facilities and has increased the number of visitors coming to the country and thereby increased the tourist's expenditure and also foreign money into the country. Due to this increase in the number of visitors in Mexico, it has also led to increase in the employment, prices of commodities, balance of payments, pollution and also lifestyle in general. This is further supported by Modeste (1995) who studied the impact of growth in tourism sector on economic development in Caribbean countries, and the study found that economic development is significantly affected by growth in the tourism sector.

A study conducted in Spain by Balaguer and Cantavella-Jorda (2002) reiterates the real contribution towards GDP and economic development. Further, Dritsakis (2004) investigates Greece's long-term economic growth impact from tourism industry by using multivariate causality analysis. The study found along-term relationship between international tourism earnings, real exchange rate, and economic growth. The results of causality analysis indicate international tourism earnings and real exchange rate cause economic growth with a strong causal relationship.

Narayan, Narayan, Prasad and Prasad (2007) analysed the relationship between tourism and economic growth in four Pacific island countries namely Fiji Islands, the Solomon Islands, Papua New Guinea and Tonga by using panel data analysis. The study found the tourism industry is a significant contributor in all the four Pacific island countries.

Further, in the European countries, a study was conducted by Cela (2007) by using the three multipliers such as investment multiplier, government multiplier, and import multiplier. As per the investment multiplier, it has been found that the tourist's arrivals and tourists expenditure have seen a substantial increase. There has been a significant expansion in infrastructure, and due to increasing demand for tourism, there have been major investments. In the government multiplier, the increase in expenditure in tourism has resulted in the increase in government expenditure as well as an increase in FDI in tourism.

In the import multiplier, tourism expenditure has also impacted the import expenditure. The government has to increase imports due to more demand from tourists for locally produced items. Therefore, the final finding was that all these factors have led to an economic impact by on the tourism industry.

Objectives of the study

1. To find the contributions of the tourism sector towards the GDP of the country and also it's other subdivisions.
2. To analyse such contributions and find ways on improving it further and coming up with a critical analysis of such growth/fall.
3. To evaluate the trend of tourists arrivals and its corresponding monetary inflow.
4. To study the relationship between the total contribution of tourism to GDP and its corresponding variables.
5. To analyse the correlation and regression between tourism receipts and GDP of India.

Research Methodology

Data Source: The data for the study mainly includes secondary data, that is various data related to tourism receipts and contributions towards GDP in India and the also the World as a whole.

Variables: GDP and tourism receipts

Analysis tools: The statistical analysis tools used are Mean, Correlation and Regression.

Tourism Receipts

As per World Bank sources, "International tourism receipts have been computed as a sum of expenditures by inbound international visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country. They also may include receipts from same-day visitors, except when these are important enough to justify separate classification."

Table 1. Using Exchange rate as on 22-12-15 @ US$1= Rs.66.2331

Year	Amount (US$)	Amount (Rs.)
2009-10	111360,00,000.00	7375718,01,600.00
2010-11	144900,00,000.00	9597176,19,000.00
2011-12	177080,00,000.00	11728557,34,800.00
2012-13	183400,00,000.00	12147150,54,000.00
2013-14	190420,00,000.00	12612106,90,200.00
2014-2015	197000,00,000.00	13047920,70,000.00

(Data published as on 22-12-2015)

Average Tourism Receipts (Mean) = $\frac{\text{Sum of Tourism Receipts}}{\text{Number of years}}$ = US$ 167360, 00,000.00

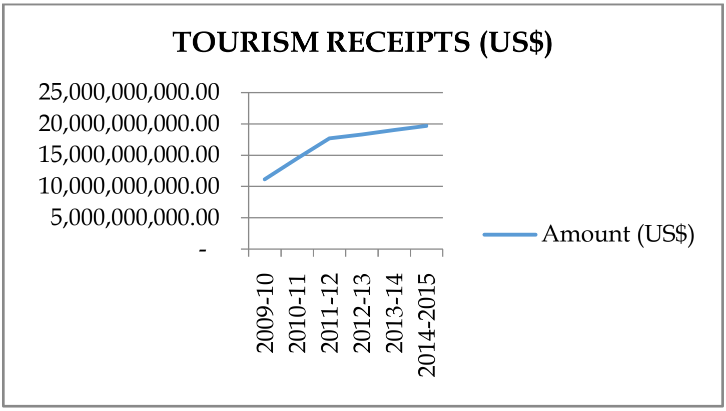

Fig 1: Figure illustrating growth in tourism receipts in India.

Analysis

Tourism receipts have gradually increased over the period for the Indian Economy as per the graph. The increase in the growth of tourism receipts is due to the reforms in the Indian government and the tourism sector in general. The Indian government has improved infrastructure facilities, transportation and communication facilities which in turn have affected the tourism sector. Also the implementation of policies such as "Incredible India" and other tourism related programmes both state-wise and country region-wise has also brought more and more tourists into the country. These reforms have resulted in the foreign money entering the country and also an increase in the tourism receipts.

Gross Domestic Product (GDP)

As per World Bank source, "GDP has been computed as the sum of gross value added by all resident producers in the economy, plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources."

Table 2. Using Exchange rate as on 22-12-15 @ US$1= Rs.66.2331

Year	Amount (US$)	Amount (Rs)
2009-10	13653714,74,048.93	904327853,77,829.90
2010-11	17084588,76,830.18	1131565276,34,981.00
2011-12	18358144,49,585.35	1215916820,20,831.00
2012-13	18317815,15,472.09	1213245682,92,415.00
2013-14	18618016,15,477.85	1233128925,78,106.00
2014-15	20485174,38,873.54	1356796603,80,655.00

(Data published as on 22-12-2015)

Average GDP (Mean) = $\frac{\text{Sum of Gross Domestic Product}}{\text{Number of years}}$ = US$ 17752908, 95,047.99

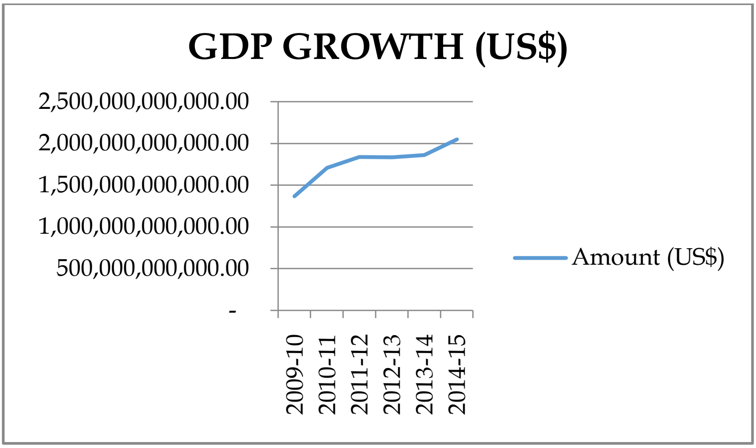

Fig.1 Graph illustrating GDP Growth in India

Analysis

The GDP growth of India has been significantly improving over the years. India is estimated to beat China regarding economic growth and become one the largest economies of the world. The reason behind India's fast-growing economy is the improvement of production, financial and service sectors in the country. The country has adopted many reforms that have affected the economy as a whole. Many new small scale industries are being formed in every nook and corner of the country. Although individually these establishments contribute very little to the economy, as a whole these industries contribute towards a large portion of the economy. Tourism also plays a vital role in the GDP growth of the country. Tourism contributes almost 6.7% of the GDP of the nation.

Table 3 Tourism Arrivals and Departures

Year	2009-10	2010-11	2011-12	2012-13	2013-14
International tourism, number of departures	11067000	12988000	13994000	14920000	16626000
International tourism, number of arrivals	5168000	5776000	6309000	6578000	6968000

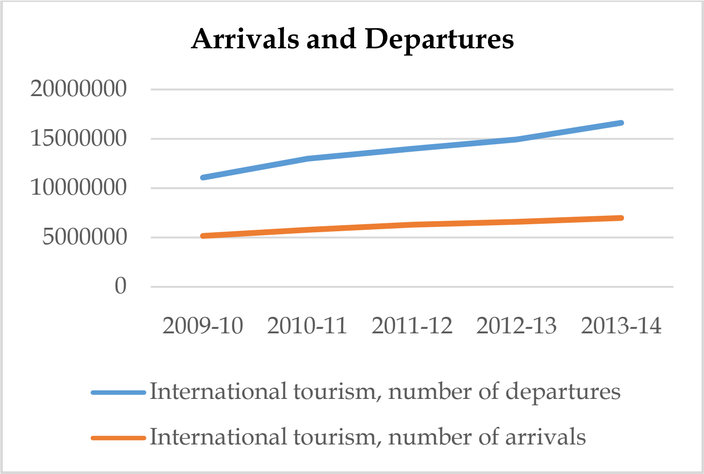

Fig.2 Arrivals and Departures

Analysis

The arrivals of international tourists are less compared to that of departures from the country. This is largely due to the slow growth of infrastructure and development of tourist destinations in the country, resulting in the loss of tourists to other tourist havens outside the country.

Table 3 Employment Impact (‘000)

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Direct contribution to employment	22,496	21,718	22,046	22,203	22,471	23,024
Total Contribution to Employment.	34,667	33,931	34,854	35,255	35,736	36,695

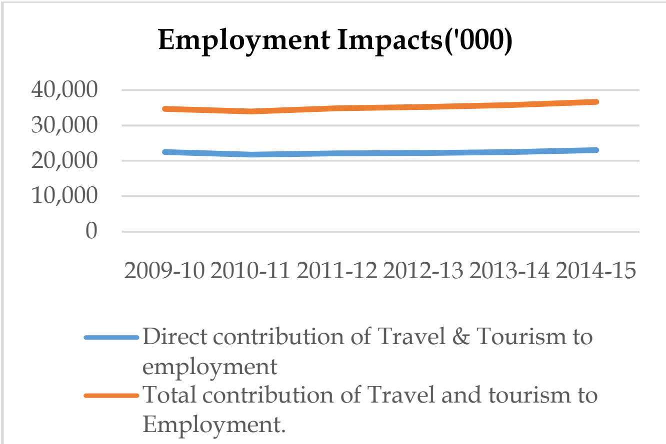

Fig.3 Employment Impacts (*000)

Analysis

Travel and tourism generated almost 23,024,000 jobs directly in the year 2014-15. This is approximately 5.5% of the total employment of the nation. Thus we can clearly see that tourism industry plays a vital role in the employment of the people of India. It contributes 5.5% to the total employment of the country, and it is estimated to grow by2% per annum. The total contribution of travel and tourism is estimated to be 36,695,000 jobs in the year 2014-15, i.e., 8.7% of the total employment.

Correlation between Tourism Receipts and GDP of India

Correlation is a single number that describes the degree of relationship between two variables. It tells us how strongly two variables are related to each other. A correlation coefficient of +1 indicates a perfect positive correlation. As variable X increases, variable Y increases. As variable X decreases, variable Y also decreases. A correlation coefficient of -1 indicates a perfect negative correlation. As variable X increases, variable Z decreases, and as variable X decreases, variable Z increases.

A correlation coefficient near 0 indicates no correlation."

$$\text{Correlation (r)} = \frac{n(\Sigma xy)-(\Sigma x)(\Sigma y)}{\sqrt{(n\Sigma x^2-(\Sigma x)^2)(n\Sigma y^2-(\Sigma y)^2}} = 0.96$$

Where, x is Tourism receipts, y is GDP
n is the number of years

Analysis

The dependent variable, in this case, is the GDP, and the independent variable is Tourism Receipts. Since correlation as calculated above is +0.96, tourism receipts, and GDP are highly correlated, and since it is closer to +1, the correlation is highly significant. It indicates a strong positive linear relationship. Therefore, it can be concluded that an increase in tourism receipts will result in the increase of GDP and vice versa.

Table 4 Correlation between Total Contribution of Travel and Tourism to GDP and its variables

Particulars	**Total contribution of Travel & Tourism to GDP**
1. Visitor exports	0.99505389
2. Domestic expenditure (includes government/ individual spending)	0.999737953
3. Internal tourism consumption (= 1 + 2)	0.999308231
4. Purchases by tourism providers, including imported goods	-0.999259652
5. Direct contribution of Travel & Tourism to GDP (=3+4)	0.999377247
Other final impacts (indirect & induced) 6. Domestic supply chain	0.99937718
7. Capital investment	0.993273612
8. Government collective spending	0.999610806
9. Imported goods from indirect spending	-0.979326283
10.Induced	0.99812653
11.Total contribution of Travel & Tourism to GDP (= 5 + 6 + 7 + 8 + 9 + 10)	1

Analysis

The table given above illustrates the result of the Correlation Coefficient Matrix. The Karl Pearson's Correlation Coefficient (r), as used above, suggests that a strong positive correlation exists between Total contribution of Travel and Tourism to India's GDP and Domestic Expenditures (r=0.999), Visitors Export (r=0.995), Internal Tourism consumption (r=0.999), Capital Investment (r=0.993), Induced (r=0.998), Government Collective Spending (r=0.999) and Domestic Supply Chain (r= 0.999). But, Tourism's contribution to GDP has a strong negative correlation with Purchase by Tourism Providers (r=-0.999) and imported goods from indirect spending(r=-0.979).

Regression between Tourism Receipts and GDP of India.

Regression analysis is a statistical tool for estimating the relationships among variables. Regression analysis helps one understand how the typical value of the dependent variable (or 'criterion variable') changes when any one of the independent variables is varied, while the other independent variables are held constant.

$$a = \bar{y} - b\bar{x}$$

$$b = \frac{\Sigma xy - n\overline{xy}}{\Sigma x^2 - n\bar{x}^2}$$

$$\bar{x} = \frac{\Sigma x}{n}, \bar{y} = \frac{\Sigma y}{n}$$

Regression= 0.92

Where, x is Tourism Receipts
y is GDP
n is the number of years
a is the y-intercept (or the value of y, when x=0)
b is the slope (or the rate of change in y for each increase of one unit in x)

Analysis

Regression is 0.92, which is considered to be a very good fit. The variation in tourism receipts, which is the independent variable, can be used to explain the variation in GDP, being the dependent variable.

Suggestions

The Indian tourism sector is still in its very early stages of development. India has large potential resources that can be utilizedto improve the tourism sector.

India is a country with large natural resources and lot of tourist havens. India lacks in infrastructure and other basic facilities.

In other similar countries such as Singapore, Malaysia, United Arab Emirates, etc., tourism sector contributes in a major way to the economy. These countries have reformed their economic policies and thus improved the tourism sector as well, to gain more foreign earnings.

Singapore is one of the most favoured tourist destinations in the world. The reason behind this is the reforms in the tourism industry of Singapore adopted by the government. The government has taken initiatives to improve the infrastructure facilities and basic infrastructures such as road and transport. Singapore is also one of the countries with lowest crime rates.

The United Arab Emirates is also a country where the tourism sector contributes majorly to the economy. Transport and other infrastructure are well developed in the UAE.

If India could adopt similar reforms like Singapore, Malaysia and UAE and other such countries, then India could also improve its tourism contribution to the economy. The government of India has to play a vital role in the improvement of the tourism sector. The government will have to improve the infrastructure facilities and also improve the transportation and communication facilities. India lacks proper road network and transportation facilities. India has a wide road network, but it is not on par with international standards. Indian transportation facilities also are backward, and India is still moving ahead with age-old rail networks. The introduction of Metro has been recently implemented and is available only in a select few cities. The expansion and introduction of metro rail and other transportation facilities and improvements in the infrastructure will, in turn, improve the tourism sector of the country.

India has 100 percent foreign direct investment in the tourism sector. Although there is 100 percent FDI, the foreign investment in this category is limited by taxes and other hurdles. The foreign investment in the tourism sector is US$34 billion. India can thus improve its tourism contribution to the GDP by implementing such small reforms and improving basic infrastructure and transportation facilities.

Conclusion

This research clearly shows there is a positive impact on tourism sector from gross domestic product. Both the tools used, Correlation and Regression, have shown apositive impact on tourism sector from gross domestic product. This has been evident in almost all the countries. But if we compare GDP contribution from tourism sector from a world perspective, Indian tourism sector has not contributed enough to GDP. World average contribution from tourism sector towards GDP is 9.8%,but India's contribution towards GDP is only 6.7%. This shows that there is huge opportunity in Indian tourism sector, and this huge opportunity has to be activated through government policies and reforms. Recent policies on improving tourism sector haveshown good results like allowing e-visa which has shown agrowth rate of 75.4% in 2015 compared to 2014. It is easy for the government to implement tourism policies in India because of the vast geography, varied culture and knowledge of English by local people. The major boom in the tourism sector is coming from medical tourism. Both tools, Correlation and Regression, have also shown a result of 0.958 and 0.92 respectively. This shows a positive impact on GDP.

By the data calculated and collected, we can conclude that there is a positive relationship between tourism sector and GDP. We see a huge opportunity waiting in the tourism sector. There is a lot of untapped opportunities to be used, and we even see a lot of policies coming up in the tourism sector like Visa-On-Arrival and e-visa. We even suggest that the government should take up policies implemented by other countries which are successful like policies implemented by countries like Singapore, Malaysia, and the United Arab Emirates.

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