An Empirical Analysis of The Relationship Between Domestic Tourism and India's Economic Growth (2001-2021)

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Abstract

This study investigates the impact of domestic tourism on India's economic growth using annual time series data from 2001 to 2021. The analysis focuses on two key macroeconomic indicators: the number of domestic tourist visits and per capita GDP at constant 2015 prices. All data were sourced from credible and official sources, namely the Ministry of Tourism's Annual Reports and the World Bank's World Development Indicators. To ensure robustness, the Augmented Dickey-Fuller (ADF) test was applied to examine the stationarity of the data, revealing that both variables are integrated of order one [I(1)]. Pearson's correlation analysis indicated a strong and positive relationship between the two variables, with a coefficient of 0.79. A simple linear regression model was estimated using EViews software, taking GDP per capita as the dependent variable and domestic tourism as the independent variable. The regression results confirm a statistically significant and positive impact of domestic tourism on economic growth, with an R-squared value of 0.758 and an F-statistic of 59.46, indicating a well-fitted model. These findings highlight the critical role of domestic tourism

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in driving India's economic development and suggest that policy measures aimed at strengthening this sector could yield substantial economic benefits.

Keywords: *Economic Growth, Domestic Tourism, GDP per capita, Economic Impact.*

Introduction

Tourism has emerged as a dynamic and resilient sector with significant potential to drive economic growth, employment, and regional development. Globally, tourism contributes approximately 10% of the world's GDP and supports one in every ten jobs (World Travel & Tourism Council [WTTC], 2021). In the context of developing economies like India, tourism plays a dual role—not only as a source of foreign exchange through international arrivals but also as a major stimulant of domestic demand through internal travel.

India's domestic tourism sector has expanded rapidly over the past two decades, driven by rising disposable incomes, improved infrastructure, increased urbanization, digital penetration, and supportive government initiatives. According to the Ministry of Tourism (2022), the number of domestic tourist visits in India rose from approximately 270 million in 2001 to over 2.3 billion in 2019 before declining temporarily due to the COVID-19 pandemic. Programs like *Incredible India*, *Swadesh Darshan*, and *Dekho Apna Desh* have played a pivotal role in promoting domestic travel and encouraging citizens to explore the cultural and natural diversity of the country.

Unlike international tourism, which is often concentrated in a few urban or iconic destinations, domestic tourism tends to spread economic benefits across a broader geographical region, including Tier-2 and Tier-3 cities and rural areas (UNWTO, 2020). This spatial dispersion helps reduce regional inequalities and supports small and medium enterprises, informal sector employment, and community-led initiatives.

While much of the existing literature emphasizes the economic impact of international tourism, there is a growing need to investigate the role of domestic tourism in influencing key economic indicators, such as GDP. Economic growth, measured in terms of per capita GDP, is often used as a proxy to understand the improvement in the average standard of living and economic well-being of a population. Theoretically, increased domestic tourism can contribute to GDP through direct spending on transport, accommodation, food services, and entertainment, as well as through indirect and induced effects on supply chains and consumption patterns (Fletcher et al., 2018).

In light of this background, the present study seeks to empirically examine the relationship between domestic tourism and India's economic growth, specifically focusing on the period between 2001 and 2021. The research utilizes correlation analysis and simple linear regression to explore the strength and direction of the relationship between the number of domestic tourist visits (independent variable) and India's per capita GDP (dependent variable). This approach is intended to assess whether domestic tourism functions as a driver of economic performance over time.

By focusing on a twenty-year timeframe, the study also captures various economic phases—including high-growth periods, global financial crises, and the pandemic shock—allowing for a more nuanced understanding of tourism's economic resilience. Moreover, it aims to fill the empirical gap in the tourism economics literature by highlighting the often-overlooked impact of internal tourism on national development.

The findings of this study could provide policy-relevant insights for both central and state-level governments, especially in the context of promoting inclusive growth through domestic tourism development. As India aspires to become a $5 trillion economy, leveraging internal tourism could be a strategic instrument for achieving sustainable and equitable growth.

Literature Review

The relationship between tourism and economic growth has attracted considerable scholarly attention over the past few decades, particularly in the context of the tourism-led growth hypothesis (TLGH). This hypothesis suggests that tourism expansion can stimulate economic performance by creating jobs, generating income, and encouraging investment across multiple sectors (Balaguer & Cantavella-Jordá, 2002; Lee & Chang, 2008). Most of the early literature focused primarily on international tourism, as it is associated with foreign exchange earnings and international trade. However, in recent years, there has been a gradual shift towards understanding the role of domestic tourism in supporting national economies, especially in large, diverse countries like India where domestic tourist flows far exceed international ones.

Studies from both developed and developing economies have presented evidence supporting the positive contribution of tourism to GDP. For example, Balaguer and Cantavella-Jordá (2002) analyzed the Spanish economy and found a long-run causal relationship between tourism receipts and economic growth, highlighting tourism as a key driver of national development. Similarly, Lee and Chang (2008), using a panel of OECD and non-OECD countries, found that tourism development contributes positively to economic growth, particularly in non-OECD countries where tourism is often labor-intensive and linked to local development. Dritsakis (2004) further reinforced this view through his empirical work on Greece, employing co-integration analysis to establish tourism's long-term influence on economic performance.

Despite such global insights, the role of domestic tourism remains underrepresented in empirical literature. According to the World Tourism Organization (UNWTO, 2020), domestic tourism constituted more than 70% of total global tourism expenditure in pre-pandemic years, signalling its enormous economic potential. Unlike international tourism, which is often vulnerable to global shocks, domestic tourism is more resilient and responsive to internal economic dynamics. This resilience became especially visible during the COVID-19 pandemic, when countries with strong domestic tourism bases, such as China and India, were able to sustain parts of their tourism economy even amidst international travel restrictions (WTTC, 2021).

In the Indian context, the tourism sector has been acknowledged as a major contributor to economic growth, employment, and cultural integration. Scholars such as Bhatia (2011) have emphasized that domestic tourism in India supports local economies by spreading income across a wider geographical area, including small towns and rural destinations. Domestic tourists in India often travel for religious, cultural, educational, and leisure purposes, creating demand for services like transportation, hospitality, food, and retail. Singh and Srivastava (2016) conducted a state-level study in Uttarakhand and demonstrated that domestic tourism significantly influences the state's GDP. Similarly, Sharma (2018) highlighted that tourism contributes substantially to India's national income and provides employment opportunities across formal and informal sectors.

From a methodological standpoint, previous studies have utilized various econometric approaches, including correlation, regression analysis, and causality testing, to examine the linkages between tourism and economic indicators. Tang and Tan (2015), in their study on Malaysia, used Granger causality tests to reveal bidirectional causality between tourism receipts and GDP growth, suggesting a feedback relationship. Fletcher et al. (2018) noted that tourism has both direct and indirect impacts on the economy, as it influences a wide array of sectors such as construction, agriculture, and manufacturing, through the multiplier effect. This suggests that the economic contributions of tourism are not limited to the hospitality sector alone but permeate through the broader economy.

However, a critical gap persists in the literature when it comes to explicitly isolating domestic tourism as an independent variable in macroeconomic models. Most studies treat tourism as an aggregate phenomenon, without distinguishing between domestic and international flows. Given that India records billions of domestic tourist visits annually—far outnumbering foreign arrivals—it becomes analytically important to study the standalone impact of domestic tourism on key economic indicators such as per capita GDP. The present study aims to fill this gap by applying empirical tools to assess whether domestic tourist visits, as a proxy for internal tourism activity, have a measurable and meaningful impact on India's economic performance over a twenty-year period.

Thus, the literature highlights both the importance of tourism as a growth engine and the lack of focused empirical analysis on domestic tourism in India. By contributing to this niche, the current research endeavors to provide fresh insights and inform tourism policy with evidence-backed findings. Understanding the dynamics of domestic tourism can enable policymakers to leverage this sector not just for economic gains but also for regional development, job creation, and social cohesion.

Objectives of the Study

- To examine the relationship between domestic tourism and India's economic growth over the period 2001 to 2021.
- To assess the impact of domestic tourist visits on per capita GDP during study period.
- To study the status of strengthening domestic tourism as a driver of sustainable economic growth in India.

H_{01} = There is no significant relationship between domestic tourism and India's economic growth over the period 2001 to 2021.

H_{02} = There is no significant impact of domestic tourist visit on per capita GDP during study period.

H_{02} = There is no significant status of strengthening domestic tourism and India's sustainable economic growth in India.

Research Methodology

This study is based on secondary data collected from credible and official sources, covering the period 2001 to 2021. The objective of the study is to examine the impact of domestic tourism on India's economic growth. For this purpose, two key variables have been considered. The number of domestic tourist visits, and India's per capita GDP at constant 2015 US dollars. The data on domestic tourist visits has been obtained from the Annual Reports of the Ministry of Tourism, Government of India, while GDP per capita data has been sourced from the World Bank's World Development Indicators databank.

Both variables have been transformed into their natural logarithmic forms to *reduce Heteroscedasticity* and *enable elasticity-based interpretation*. Before proceeding with the regression analysis, the *Stationarity of the time series data* was tested using the *Augmented Dickey-Fuller (ADF) test*. The results confirmed that both variables *are non-stationary at level* but become stationary after first differencing, indicates that they are integrated of order one, I (1).

To explore the relationship between the two variables, a Pearson correlation analysis was conducted. Subsequently, a simple linear regression model was estimated using E-Views software to measure the impact of domestic tourism on economic growth. The functional form of the regression equation is as follows:

$ln(GDP\_PER\_CAPITA) = \alpha + \beta\ ln\ (DOMESTIC\_TOURISTS) + U_t$.

Where:

α = intercept,

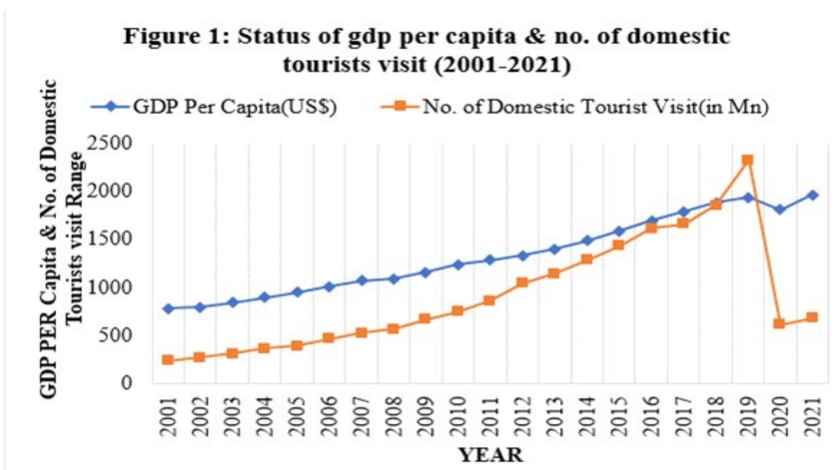
β = regression coefficient, and

U_t = error term

Table 1.1: Relationship between Per Capita GDP (US $) and No. of Domestic Tourist Visits

Year	GDP Per Capita(US$)	No. of Domestic Tourist Visit(in Mn)
2001	778.5	236.47
2002	793.6	269.6
2003	841.3	309.04
2004	892.6	366.27
2005	947.7	392.04
2006	1008.2	462.44
2007	1069.2	526.7
2008	1086.5	563.03
2009	1155.1	668.8
2010	1235.2	747.7
2011	1281.6	864.53
2012	1333.1	1045.05
2013	1399.5	1142.53
2014	1484.3	1282.8
2015	1584	1431.97
2016	1694.5	1615.39
2017	1788.7	1657.55
2018	1883.4	1853.79
2019	1936	2321.98
2020	1806.5	610.22
2021	1965.3	677.63

Source: India Tourism Statistics at a Glance, 2022 & World Bank Data Bank



Source: Authers Calculations

The data on India's GDP per capita and domestic tourist visits from 2001 to 2021 shows a strong connection between economic growth and tourism activity. Between 2001 and 2019, GDP per capita steadily increased from US$778.5 to US$1936, while domestic tourist visits rose sharply from 236.47 million to 2321.98 million. This suggests that as people's incomes grew, they were more likely to travel within the country. The trend supports the idea that higher income levels lead to more spending on non-essential services like tourism. However, the COVID-19 pandemic in 2020 caused a major drop in both indicators—GDP fell to US$1806.5 and tourist visits dropped to 610.22 million. In 2021, the economy recovered to some extent, with GDP per capita rising to US$1965.3, but tourism recovered more slowly, with visits increasing only to 677.63 million. This shows that while tourism grows with the economy, it is also more vulnerable to sudden shocks like a health crisis.

The Stationarity of the natural logarithm of GDP per capita in US dollars (LN_GDP_PER_CAPITA_US$) was examined (below) using the **Augmented Dickey-Fuller (ADF) test** with a constant and linear trend. The test statistic of -4.7270 is below the critical values at the 1%, 5%, and 10% levels, and the associated p-value of 0.0069 indicates statistical significance at the 1% level. This leads to the rejection of the null hypothesis of a unit root, confirming that the first-differenced series is stationary. Thus, the original series is non-stationary at level but becomes stationary after first differencing. Furthermore, the lagged dependent variable is negative and statistically significant, indicating mean reversion in the series. As a result, LN_GDP_PER_CAPITA_US$ is determined to be integrated of order one [I(1)], and its first differenced form will be used in subsequent time series analyses to ensure valid and reliable results.

Table 1.2: Stationarity Test of GDP Per Capita & No. of Domestic Tourists

Variables	ADF Statistics with Trend & Intercept at 1st Difference	Critical Values	P-Value
Ln GDP per capita	-4.7270001	At 1% level = -4.532598	0.0069
		At 5% level = -3.673616	
		At 10% level = 3.2773364	
Ln_No.of Domestic Tourists	-5.335627	At 1% level = -4.532598	0.0022
		At 5% level = -3.673616	
		At 10% level = 3.2773364	

Source: Authers Calculations

The Augmented Dickey-Fuller (ADF) test was employed to examine the Stationarity of the variable representing the number of domestic tourist visits, which was transformed into its natural logarithmic form (LNDOMESTICTOUR) for analysis. The test was conducted with a constant and linear trend. The resulting test statistic of -5.3356 is lower than the 1%, 5%, and 10% critical values, and the corresponding p-value of 0.0022 indicates significance at the 1% level. These results lead to the rejection of the null hypothesis of a unit root, implying that the differenced series is stationary. This confirms that the original series is non-stationary at level but becomes stationary after first differencing. Additionally, the coefficient of the lagged differenced term is negative and statistically significant, indicating mean reversion. Therefore, the variable is concluded to be integrated of order one [I(1)], and its first difference will be used in subsequent analyses to ensure statistical robustness.

Correlation Analysis and Result

Variables	GDP per Capita	No. Domestic Tourists
GDP per Capita	1.00	0.794822
No. Domestic Tourists	0.794822	1.00

Source: Authers Calculations

The Pearson correlation matrix indicates a strong and positive relationship between GDP per capita and the number of domestic tourist visits. The correlation coefficient between these two variables is 0.7948, which is close to 1, suggesting a high degree of positive linear association. This implies that as the number of domestic tourist's increases, GDP per capita also tends to rise. Such a strong correlation provides initial empirical support for the hypothesis that domestic tourism plays a substantial role in enhancing economic development.

Table 1.3: Result of Regression Analysis for No. of Domestic Tourists

Variables	Coefficient	Standard Error	t-Statistics	P-value
Ln_No. of Domestic Tourists	0.400539	0.051943	13.06420	0.000
Intercept	4.504263	0.344779	13.06420	0.000
R-square	0.75783			
Adjusted R-square	0.745098			
F-statistic	059.46159			0.000

Source: Authers Calculations

The regression analysis establishes a statistically significant and robust relationship between domestic tourism and economic growth in India over the period 2001 to 2021. The model indicates that the log of domestic tourist visits positively influences the log of GDP per capita, with a coefficient of 0.4005, which is statistically significant at the 1% level ($p < 0.01$). This implies that a 1% increase in domestic tourist visits is associated with an approximately 0.4% increase in GDP per capita, holding other factors constant. The model also demonstrates strong explanatory power, with an R-squared value of 0.758, meaning that about 76% of the variation in per capita GDP can be explained solely by changes in domestic tourism over the observed period. These results provide strong empirical evidence supporting the tourism-led growth hypothesis, suggesting that increased domestic tourism contributes meaningfully to economic development. The high F-statistic (59.46) with a highly significant p-value further confirms the reliability of the model in capturing this relationship. This finding has important policy implications: it reinforces the need for government and private stakeholders to invest in tourism infrastructure, improve transportation connectivity, and promote cultural and regional tourism circuits. Given India's demographic and geographic diversity, domestic tourism has untapped potential to serve as a sustainable engine for inclusive economic growth. Although residual diagnostics such as the Durbin-Watson statistic could offer additional insights into model efficiency and autocorrelation, the core inference regarding the positive role of domestic tourism in enhancing per capita GDP remains strong and statistically validated. Future research may incorporate other macroeconomic variables and adopt dynamic models to examine long-term causality and structural changes in this relationship.

Findings and Conclusion

This study explored the impact of domestic tourism on India's economic growth from 2001 to 2021 using reliable secondary data sourced from the Ministry of Tourism and the World Bank. Through statistical tools such as Stationarity testing, correlation analysis, and simple linear regression modelling in E-Views, the research established that there is a significant and positive relationship between domestic tourism and economic growth. The results affirm that the increasing movement of people within the country not only enhances regional economies but also contributes meaningfully to the national income by generating demand across various service sectors such as hospitality, transport, and local trade. The study, therefore, supports the view that domestic tourism can serve as a strategic pillar in India's broader economic development plans.

While the findings are both relevant and timely, a few practical limitations were encountered during the research process. These include constraints of time, access to some recent datasets, and limitations associated with the academic nature of the study such as scope for extended modelling and field verification. However, these are logistical in nature and do not compromise the credibility or significance of the results. The methodology and data analysis applied remain robust and appropriate for the research objectives.

This study opens up further possibilities for research in the field of tourism economics. Future studies can expand on this work by including state-wise data, categorizing types of domestic tourism (religious, leisure, heritage, etc.), and applying advanced econometric models to capture long-term relationships and causal dynamics. Despite its defined scope, this research contributes meaningfully to understanding how domestic tourism influences economic performance in India and highlights the need for sustained policy support, infrastructure development, and targeted investment in the tourism sector to harness its full economic potential.

Policy Recommendations

1. **Enhanced Infrastructure Investment**: The government should invest in improving tourism-related infrastructure, especially in Tier 2 and Tier 3 cities, pilgrimage sites, and eco-tourism destinations to attract and accommodate more domestic tourists.
2. **Digital Promotion and Awareness**: Strengthening digital marketing strategies, tourism apps, and social media outreach can help promote lesser-known destinations, especially among younger travellers.
3. **Skill Development in Tourism Services**: Vocational training programs focused on hospitality, language, and cultural knowledge can enhance the quality of services and generate employment in the tourism sector.
4. **Public-Private Partnerships (PPP)**: Encouraging private sector participation in tourism development through incentives and joint initiatives can boost investments and innovation in the sector.

5. **Sustainable Tourism Policies**: Formulating policies that ensure responsible tourism practices—such as waste management, local community participation, and preservation of cultural heritage—can contribute to long-term socio-economic benefits.

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