

Growth of Foreign Tourist Arrival in India- A Study of the Impact of Covid-19

Effulgence

Vol. 24, No. 1

January - June 2026

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Abstract

Tourism is a cornerstone of economic and socio cultural development worldwide, offering opportunities for income generation, employment and cross cultural exchange. Recognized as one of the fastest- growing industries, it is an essential contributor to global gross domestic product (GDP). While tourism is a driver of growth, it is also highly susceptible to external shocks. For instance, global economic recessions, political instability and health crises such as the Covid-19 pandemic have had profound impacts on the industry. India is a key player in global tourism, attracting million of international visitors annually. Indian tourism sector faces numerous challenges. Infrastructure gaps, regional disparities in tourist arrivals and insufficient marketing efforts have hindered its potential. Moreover, global disruptions, such as the Covid-19 pandemic have exacerbated vulnerabilities. Therefore, the goal of my study is to investigate the impact of Covid-19 on growth of foreign tourist arrival in India. Semi log regression equation including dummy variables has been used for empirical purpose. The present study can be of great help for the policy makers as it will help them to develop various contingency plans to alleviate the negative impact of crises and pandemics and to design targeted strategies to attract foreign tourists.

Keywords: Foreign Tourist Arrival, Global Financial Crisis, Covid-19 .

INTRODUCTION

Tourism is one of the world's largest and fastest-growing industries, with profound economic, social, and cultural implications. For many nations, it serves as a major driver of economic growth, foreign

exchange earnings, and employment. Among these, India has emerged as a key player in global tourism, attracting millions of foreign visitors annually. The country's vast cultural diversity, historical heritage, scenic landscapes, and thriving urban centres make it a prime destination for international travellers.

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According to the World Travel and Tourism Council (WTTC), the sector accounted for 4.6% of India's Gross Domestic Product (GDP) in 2020, with the tourism and hospitality industry directly employing over 30 million people (Impact-WTTC, 2021). The substantial contribution of foreign tourist arrivals (FTAs) to India's economy is seen in the form of foreign exchange earnings (FEE), a critical indicator of international trade.

India's tourism sector, however, is not immune to global economic disruptions. The COVID-19 pandemic, which began in early 2020, caused a dramatic reduction in global tourism flows, significantly affecting countries like India that rely heavily on international visitors (Folinas & Metaxas, 2020). Travel restrictions, health safety concerns, and lockdowns led to an unprecedented decline in both foreign and domestic tourist arrivals. The pandemic's impact on the tourism sector has prompted urgent questions about the resilience of tourism economies and the adaptability of destination countries like India in the face of such shocks (Altshuler & Schmidt, 2021). Thus, the purpose of my study is to find the impact of Covid-19 on growth of foreign tourist arrivals in India.

Objectives of the study

1. To analyse the impact of Global Financial Crisis on growth of Foreign Tourist Arrivals to India for the period 2001 to 2023.
2. To analyse the impact of Covid-19 on growth of Foreign Tourist Arrivals to India for the period 2001 to 2023.
3. To analyse the impact of Post-Covid period on growth of Foreign Tourist Arrivals to India for the period 2001 to 2023.

Literature Review

In order to achieve the objectives, number of studies has been reviewed. Some of them are presented below:

Khalid et al (2019) investigated the effect of different economic and financial crises, such as inflation crisis, stock market crash, debt crisis, and banking crisis on international tourism flows. They used panel gravity data set of 200 countries over the period 1995 to 2010. They found that the inflation crisis has a dampening effect on international tourism flows in both the host and origin countries. Domestic debt crisis encourages international tourism arrivals in the host countries, whereas its impact on international tourism services in originating countries is negative. In particular, banking crisis depresses international tourism flows in host countries situated in regions such as America and Latin America and Caribbean, whereas its impact on originating countries located in regions such as Asia and the Middle East is insignificant.

Esquivias, M. A. et al.(2021) estimated the economic losses in Indonesia's tourism sector due to the COVID-19 pandemic using an Autoregressive Integrated Moving Average Model (SARIMA). Additionally, an autoregressive distributed lag model (ARDL) is employed to estimate the demand for tourism in Indonesia from the six largest inbound tourist countries, from 1989 to 2019. They found that Income per capita, relative prices, and substitution prices significantly impact the demand from overseas travelers for tourism opportunities in Indonesia. Inbound tourism from India may experience the largest negative impact from COVID-19 due to the large income elasticity, negative price elasticity, and a possible substitution in destinations amid changes in prices. Tourists from Singapore and Australia may soon revisit as they see Indonesia as an inexpensive destination. Japan may revisit depending on whether tourism prices in Indonesia remain competitive or not.

Sahoo, Ashri and Gulati (2021) estimated economic loss suffered by the manufacturing sector by developing various scenarios. They found that out of selected 17 industries which have shown positive growth rates except cotton ginning industry which has shown a negative growth rate. The results

unveiled an economic loss in to the manufacturing sector from most optimistic to most pessimistic scenario. Net value added (NVA) of manufacturing sector is expected to shrink from most optimistic to most pessimistic scenario. Machinery and equipment, motor vehicles, trailers and semi-trailers and cotton ginning industry are the worst hit.

Kumar De & Borah(2022) examined the impact of COVID-19 pandemic on the tourism sector in India. They found a massive decline in Foreign Exchange Earnings (FEEs) and Foreign Tourist Arrivals (FTAs) during this pandemic period and taken the sector to a decade back.

Meng, X et al (2015) in their study employed Singaporean tourism survey data, the updated Singaporean input-output tables and a computable general equilibrium model to gauge the long-run effects of the 2008 global financial crisis and selected policy responses. They found that the global financial crisis has had mild negative long-run effects on the overall development of Singapore's economy, and that the GST deduction policy ought to offset this negative effect.

Buigat, S (2018) used dynamic panel model to compare the effect of terrorism on developed and emerging country demand for tourism in Kenya. He found that intensity of terror attack measured by fatalities significantly reduces tourist arrivals from developed countries but not from emerging countries. A 1% increase in fatality reduces arrivals

from developed countries by 0.082%. This translates to 2487 visitors per year, or roughly 155.8 million Kenya shillings lost annually from an increase of one fatality per quarter.

LU, C.L et al (2018) investigated the changes in international tourism demand before and after economic crisis. The data period was January 2004 to December 2014. They found that the tourist numbers in each country was affected by the income variable. The decrease in tourist numbers was most significant during and after the economic crisis, indicating an increase in the sensitivity of tourists toward their economic-crisis-based income fluctuations, causing changes in their travel behavior.

Data and Methodology

The study has used annual time series data on Foreign Tourist Arrivals in India covering the period from 2001 to 2023. The data used in this research has been primarily sourced from secondary sources. The time series data for this period has been sourced from the India Tourism Statistics publications by the Ministry of Tourism, Government of India.

For the purpose of analyzing the impact of major global shocks on the growth of foreign tourist arrivals in India, the whole time period is divided into four sub periods namely Pre- Global Financial Crisis Period, Global Financial Crisis Period, Covid-19 Period and Post- Covid Period.

Policy Period		
2001-2007	Period I	Pre-Global Financial Crisis Period
2008-2019	Period II	Global Financial Crisis Period
2020-2021	Period III	Covid-19 Period
2022-2023	Period IV	Post-Covid Period.

Regression analysis is conducted to ascertain the growth rates of foreign tourist arrivals during the period under consideration. Dummy variables have been introduced in semi log regression equation to find the impact of different policy periods on foreign tourist arrivals in India.

The following is the semi log regression equation including dummy variables for determining the growth rates for different policy periods:

$$\text{Log } Y = \alpha_1 + \beta_1 t + \beta_2 D_2 + \beta_3 D_3 + \beta_4 D_4 + \beta_5 D_2 t + \beta_6 D_3 t + \beta_7 D_4 t + \mu t$$

Where,

Log Y = Natural log of variable Y (Foreign Tourist Arrivals)

- α_1 = intercept of the I period
- β_1 = growth rate in I period
- β_2 = difference in the intercept of I and II period
- β_3 = difference in the intercept of I and III period
- β_4 = difference in the intercept of I and IV period
- β_5 = difference in slope or growth rate of I and II period
- β_6 = difference in slope or growth rate of I and III period
- β_7 = difference in slope or growth rate of I and IV period

μt = error term

D_2 = first dummy variable to measure the impact of Global financial Crisis which takes value 1 for the period 2008- 2019 and 0 for the other periods. i.e.

- 0 for 2001 to 2007
- 1 for 2008 to 2019
- 0 for 2020 to 2021
- 0 for 2022 to 2023

D_3 = second dummy variable to measure the impact of Covid-19 which takes value 1 for the period 2020-2021 and 0 for the other periods. i.e.

- 0 for 2001 to 2007
- 0 for 2008 to 2019
- 1 for 2020 to 2021
- 0 for 2022 to 2023

D_4 = Third dummy variable to measure the impact of Post-Covid Period which takes value 1 for the period 2022- 2023 and 0 for the other periods. i.e.

- 0 for 2001 to 2007
- 0 for 2008 to 2019
- 0 for 2020 to 2021
- 1 for 2022 to 2023

Therefore, with the help of above equation we can find out annual compounding growth rate and intercept for the different periods.

Periods	Intercept	Annual compounding growth rate
I period	α_1	β_1
II period	$\alpha_1 + \beta_2^*$	$\beta_1 + \beta_5^*$
III period	$\alpha_1 + \beta_3^*$	$\beta_1 + \beta_6^*$
IV Period	$\alpha_1 + \beta_4^*$	$\beta_1 + \beta_7^*$

These term will be added only if found to be significant. (at 5% level of significance)

Hypotheses:

- (i) For evaluating the impact of Global Financial Crisis on growth of foreign tourist arrivals in India, the

estimated hypothesis is:

H_{01} : There is no impact of Global Financial Crisis on growth rate i.e. $\beta_5 = 0$

H_{11} : There is impact of Global Financial Crisis on growth rate i.e. $\beta_5 \neq 0$

(ii) For evaluating the impact of Covid-19 on growth of foreign tourist arrivals in India, the estimated hypothesis is:

H_{02} : There is no impact of Covid-19 on growth rate i.e. $\beta_6 = 0$

H_{12} : There is impact of Covid-19 on growth rate i.e. $\beta_6 \neq 0$

(iii) For evaluating the impact of Post-Covid period on growth of foreign tourist arrivals in India, the estimated hypothesis is:

H_{03} : There is no impact of Post-Covid period on growth rate i.e. $\beta_7 = 0$

H_{13} : There is impact of Post-Covid period on growth rate i.e. $\beta_7 \neq 0$

Results and Findings:

Table 1 : Regression Statistics of Foreign Tourist Arrivals in India

	Coefficients	Standard Error	t Stat	P-value
Intercept	-249.282	18.83164	-13.2374	1.12E-09
t	0.131894	0.009397	14.03574	4.94E-10
D ₂	119.6762	20.60895	5.807002	3.46E-05
D ₂ t	-0.05967	0.010276	-5.80656	3.46E-05
D ₃	1448.466	143.3258	10.1061	4.35E-08
D ₃ t	-0.71821	0.070946	-10.1233	4.25E-08
D ₄	-526.364	143.4653	-3.66893	0.00228
D ₄ t	0.259463	0.070946	3.657194	0.002335

Table 2 : Growth Rates of Foreign Tourist Arrivals in Different Periods

Periods	Growth Rate %	Significant or Insignificant
I Period(Pre-Global Financial Crisis)	13.18	Significant
II Period(Global Financial Crisis)	7.222	Significant
III Period (Covid-19)	-58.63	Significant
IV Period (Post-Covid Period)	39.13	Significant

We applied regression technique and found that during pre global financial crisis period, the average annual growth in India's foreign tourist arrivals was 13.18% which is statistically significant as p value is less than 0.05. This shows that there is a strong upward trend in foreign tourist arrivals in India.

During the period of global financial crisis, the average annual growth rate of foreign tourist arrivals in India decreased from 13.18% to 7.22% and it is also significant as p value is less than 0.05. Thus, we can reject the null hypothesis and accept that there is a negative and significant impact of Global Financial Crisis on the foreign tourist arrivals in India. This was due to slowdown of world economy which reduced disposable income and international travel expenses in major source nations like US, UK.

During the period of Covid-19, the growth rate has decreased drastically by 71.8% and reduced to - 58.63% which is also significant as p value is less

than 0.05. Thus, we can reject the null hypothesis and accept that there is a negative and significant impact of Covid-19 on the foreign tourist arrivals in India. This was due to travel restrictions, health issues, lockdowns and economic uncertainty. Flight cancellations, visa suspensions and the closure of tourist attractions further discouraged international travel, contributing to the sharp decline in foreign arrivals.

During the Post- Covid period, the average annual growth rate of foreign tourist arrivals in India increased from 13.18% to 39.13 % as compared to pre crisis period and it is also significant as p value is less than 0.05. Thus, we can reject the null hypothesis and accept that there is a positive and significant impact of Post-Covid period on the foreign tourist arrivals in India. This was due to removal of travel restrictions, improvement in vaccination rates and revival of traveller's confidence.

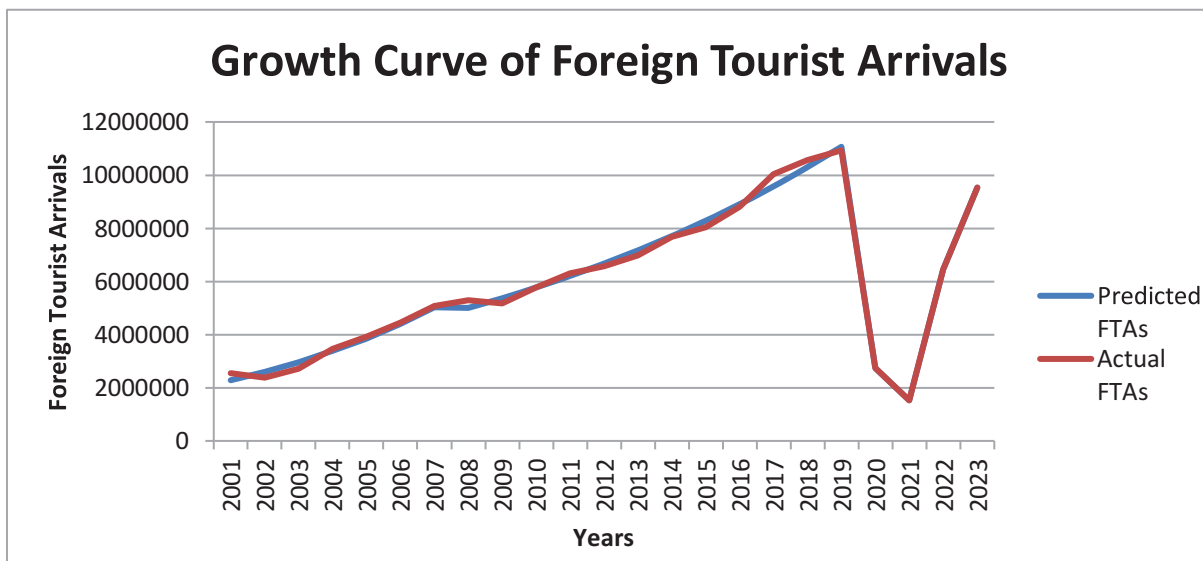


Figure 1 : Growth Curve of Foreign Tourist Arrivals in India

The above figure shows that both actual and predicted foreign tourist arrivals curves are moving closely together till 2019, indicating consistent growth and good model fit. A dramatic decline in 2020-2021 reflects the significant impact of Covid-19 on tourism. There were signs of recovery after 2022, indicating that the sector was gradually rebounding as travel restrictions ease and international tourism resumed.

CONCLUSION

This paper evaluates the impact of Covid-19 on the growth of foreign tourist arrivals in India. For this, we have used semi log regression equation including three dummy variables to measure the impact of GFC, Covid-19 and Post Covid Period. The whole period is divided into four policy periods: pre global financial crisis, global financial crisis, Covid-19 and Post- Covid Period. Our result reveals that the growth rate of foreign tourist arrival in India declined significantly by 5.9% during global financial crisis and by 71.8% during covid-19. During Post Covid period, growth rate was increased by 25.9%. The growth rates in all the periods are also significant.

The present study can be of great help for the policy makers as it will help them to develop various contingency plans to alleviate the negative impact of crises and pandemics and to design targeted strategies to attract foreign tourists.

REFERENCES

- Khalid,U.,Okafor, L.E., Shafiullah, M.(2019) "The Effects of Economic and Financial Crises on International Tourist Flows: A Cross-Country Analysis." *Journal of Travel Research*. 59(2):315-334
- Esquivias,M. A., Sugiharti, L., Rohmawati, H., & Sethi, N. (2021). "Impacts and implications of a pandemic on tourism demand in Indonesia." *Economics and Sociology*, 14(4), 133-150.
- Sahoo, B.P., Ashri, D., & Gulati, A.(2021) "Impact of COVID-19 on the Indian Manufacturing Sector: An Empirical Approach" *The Empirical Economic Letters*, (Special Issue 5):317-322
- Jaipuria, S., Parida, R., & Ray, P. (2020). "The impact of COVID-19 on tourism sector in India." *Tourism Recreation Research*, 46(2), 1-16
- De, U., & Borah, B.(2024). "Impact of covid-19 pandemic on tourism in India" *Journal of Tourism and Sports Research*, 4(3):1140-1150
- Sarkar,S (2022). "Impact of Tourism on Economic Development of India". *Journal of Emerging Technologies and Innovative Research*, 36-41
- Meng, X., Chin, A., Grant, B. (2015), " Long-run effect of the global financial crisis on Singapore's tourism and the economy". *Asian Economic Journal*, 29(1), 41-60.
- Buigut, S.(2018) "Effect of terrorism on demand for tourism in Kenya: A comparative analysis" *Tourism and Hospitality Research*, Vol. 18(1) 28-37.
- Lu, C L., Chen, S.T., & Kuo, H.I. (2018) "International tourism demand in Asia: before and after the economic crisis", *Asia Pacific Journal of Tourism Research*, DOI: 10.1080/10941665.2018.1524774
- Song,R., Lin, V.S.,Zhang, C.,& Gao, W.(2010). "Global Financial/Economic Crisis and Tourist Arrival Forecasts for Hong Kong, DOI:10.1080/10941661003687431
- Naudé, W., and Saayman, A(2005). "Determinants of tourist arrivals in Africa: a panel data regression analysis" *Tourism Economics*, 2005, 11 (3), 365-391
- Preedatham, K., Vivatvanit, V., & Suksonghong, K(2018). "Modeling The Demand for inbound Tourism to Thailand: Panel Data Approach" *Advances in Economics, Business and Management Research (AEBMR)*, volume 52
- Kadir, N., Nayan, S., Abdullah, M.S., (2013). "A Panel Data Analysis of International Tourist Arrivals from ASEAN Countries to Malaysia" *Procedia Economics and Finance*,7: 80-85
- Altshuler, A., & Schmidt, J. (2021). "Why does resilience matter? Global implications for the tourism industry in the context of COVID-19." *Worldwide Hospitality and Tourism Themes*,

13(3), 431-436.

Folinas, S., & Metaxas, T. (2020). Tourism: The great patient of coronavirus COVID- 2019, URL - <https://mpa.ub.uni-muenchen.de/103515/>

Indian Tourism Statistics 2022-2023, Ministry of Tourism, Government of India.

Annual Report of tourism, Ministry of Tourism, Government of India

Ministry of Tourism, India (2019). India Tourism Statistics. New Delhi Government of India.