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# A Systemic Analysis of the Impact of the Pandemic on the Indian Tourism Economy

## Poonam Munjal

*The COVID-19 pandemic had a severe impact on the tourism industry across the world. Be it aviation or hospitality, transportation, tour operators or eateries, every activity related to tourism was adversely affected by the pandemic in an unprecedented manner. India saw the first severe impact during the first quarter of 2020–2021 when the tourism industry was severely affected, in terms of loss in tourism demand due to a significant fall in tourist arrivals. The industry saw gradual signs of recovery post-October 2020 but was hit again by the second wave during April–June 2021 and then by the third wave during November 2021–January 2022. Given the contribution that tourism makes to the entire economy in terms of income and employment generation, it is important to do a systemic estimation of the losses caused by the pandemic so that resilient policies are put in place to address the challenges at all levels and put the tourism sector back on the path it was traversing before the pandemic. This article presents the estimates of economic losses resulting from the changes experienced during the most critical period of the pandemic, that is, the first quarter of 2020–2021, which witnessed a complete lockdown, and the subsequent two quarters, wherein the sector started showing gradual recovery following various relaxations in economic activities and travel movements. The estimates are based on the methodology that draws from the framework laid out in the Tourism Satellite Account of India, which, in turn, is based on the methodological framework recommended by the United Nations World Tourism Organization.*

**Keywords:** *COVID-19 Pandemic, Tourism Satellite Account, Indian Tourism, Domestic Tourism, Inbound Tourism, Tourism Direct Gross Value Added*
**JEL Codes:** *L830, Z320, F620*

## 1. Introduction

Tourism signifies not just the movement of people from one place to another for leisure, business, education, social purposes and health, among other

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reasons, but is also an important economic activity that generates domestic and imported demand in the economy. In addition, it creates jobs, provides livelihood opportunities and enhances the incomes of several households. There are a number of countries or regions within the countries which are entirely dependent on tourism. Therefore, the quantification of the role of tourism in an economy is an important input for devising tourism-related policies. It is equally important to measure the potential losses if tourism activities diminish or collapse for any reason.

This situation of unanticipated losses occurred during the COVID-19 pandemic period. The pandemic had a severe impact on the economies of countries across the world, resulting in a sharp contraction in their respective gross domestic product (GDP) figures and the concomitant loss of jobs, particularly in the first half of 2020–2021. The tourism sector, in particular, had to face the brunt of the repeated waves of the pandemic, resulting from the emergence of several mutants of the infection across the world. The entire spectrum of tourism activities, including accommodation-providing services, food-serving facilities, passenger transport services and tour operators, among others, was adversely affected in an unprecedented manner.

India is one of the many countries whose tourism sector was adversely impacted by the pandemic. During the first half of 2020–2021, the number of infections and mortalities kept increasing with each passing day. This led to the country-wide lockdown characterised by aggressive travel restrictions, work- and learn-from-home arrangements, social distancing, curbs on crowding and even imposition of curfews in some parts of the country. These brought tourism activities to a near halt. The direct impact of this cessation of tourism activities was felt by the households whose livelihood depended on tourism. Their income levels shrank drastically and many of them even lost their jobs.

This was a huge blow to the tourism industry, which accounted for a direct share of 2.7 per cent of India's GDP and 6.7 per cent of its employment in the pre-pandemic year of 2019–2020, as estimated and projected using the latest Tourism Satellite Account (TSA) for India for 2015–2016 (NCAER, 2018). The past trend has also been very promising with respect to the sector's generation of jobs. The estimated number of jobs rose from 23.4 million in 2009–2010 to 31.5 million in 2015–2016, recording a growth of 34.6 per cent since 2009–2010 or a compound annual growth rate (CAGR) of 5.1 per cent each year.

In addition, the sector makes a significant indirect contribution, given its strong linkages with other sectors of the economy, both as a user and as a supplier of goods and services. With the estimated GVA multiplier of 1.9236 and employment multiplier of 2.2931, as estimated in the third TSA, the tourism sector's total contribution (direct as well as indirect) swells to 5.2 per cent in GDP and 15.3 per cent in employment.

Therefore, the severe impact of the pandemic on tourism, which resulted in the complete disappearance of tourism from the economy at least for a while, is expected to result in a huge loss to the economy. However, in order to quantify this loss, the detailed assessment of the sector becomes extremely important so that policymakers can take revival measures and stakeholders are better prepared to face any such future shocks.

This article captures and quantifies the economic losses caused by the pandemic to the tourism economy as well as the overall economy in India. The study period includes all the four quarters of the financial year 2020–2021, with the first quarter being the one which witnessed the complete lockdown, the subsequent two quarters which started showing a gradual recovery in the tourism sector with various relaxations in economic activities and travel movements, and the fourth quarter towards the end of which the country witnessed the beginning of the second wave of the pandemic, resulting from the highly transmissible Delta variant of the virus.

The impact of the pandemic has been assessed through the loss in gross value added (GVA). The estimates are based on the methodology that draws from the framework laid out in the TSA of India, which in turn is based on the methodology recommended by the United Nations World Tourism Organization (TSA: Recommended Methodological Framework, UNSD, 2008).

## 2. Review of Literature

A review of the literature shows a few studies that estimate the impact of the COVID-19 pandemic on various sectors of the economy, including tourism. An Asian Development Bank Brief (Abiad et al., 2020) estimates this impact through the channels such as trade, tourism and production linkages, right at the initial stage of the pandemic, that is, March 2020, when not much was known about how the virus would spread. The article finds that for India, the tourism revenues as a percentage to GDP are estimated to fall from 0.003 per cent in the best-case scenario to 0.009 per cent in the worst-case scenario. However, the early timing of the analysis undertaken for this article indicates that these estimates are far from reality.

Another paper by Ribeiro et al. (June 2020) estimates the impact of the COVID-19 pandemic on tourism in Brazil. This article uses the partial hypothetical extraction method, based on input–output modelling, to assess the economic impact under two scenarios. The first scenario assumes the withdrawal of informal tourism workers resulting from the lockdown and contraction in tourism demand. In the second scenario, apart from the restrictions of the first scenario, it is assumed that social and compensatory policies initiated by the government could offset the economic effects of tourist activities.

The research article, 'COVID-19 and Tourism–Assessing the Economic Consequences', published by the United Nations Conference on Trade and Development (UNCTAD, 2020), uses the computable general equilibrium (CGE) model to assess the severity of the COVID-19 crisis and its impact on the tourism sector. Abbas et al. (2021) provide suggestions for reviving the activities related to the tourism industry and offer recommendations for government, scholars and tourism firms to restore normalcy in the tourism sector.

The present article contributes to the available literature by estimating the impact of the pandemic on the tourism economy. The article estimates the impact of both demand-side shocks resulting from a fall in tourist arrivals, as well as the supply-side shocks owing to the shutting down of industries that supply tourism-related goods and services. These impacts have also been estimated separately in order to facilitate an independent assessment.

## 3. Methodology

The tourism economy is measured through an internationally accepted and adopted framework called the TSA to assess the size of the tourism economy and hence its share in the total economy with respect to the GDP and employment. The TSA brings together the demand- and supply-side details for each of the tourism-specific as well as non-tourism-specific goods and services in the supply and use table (SUT) framework (Chapter 1, Para 1.12, UNSD, 2008), in order to generate the tourism product ratios (TPRs) and tourism industry ratios (TIRs) for the entire range of products and industries of an economy.

TPR refers to the proportion of a product's total supply in the economy that is consumed by tourists or is due to tourism activity. The total supply of a product is the sum of its domestic supply and its imports. TPR, being the ratio at product level, is kept as a column vector in the SUT framework where products are presented in rows. Hence, each product is assigned its corresponding TPR.

On the other hand, TIR refers to the similar ratio at the industry level. The TIRs are derived when the TPR column vector is multiplied by each of the industry columns in the SUT framework and presented as additional columns depicting the share of tourism. These TIRs, when applied to the GVA of each industry, result in the derivation of Tourism Direct Gross Value Added (TDGVA), which is the measure of the Tourism economy (Chapter 4, Para 4.50, UNSD, 2008).

While TPRs and TIRs are not expected to show a significant change over at least a five-year period of time under normal circumstances, an abnormal occurrence of the likes of the COVID-19 pandemic, which impacted not just the travel movement but day-to-day activities of people across the world, can completely distort these ratios.

This article carries out the systemic analysis of the tourism economy as witnessed during the pandemic period, considering both the overall fall in the economy as also the fall in tourist arrivals. Hence, while doing so, the article estimates the impact of the pandemic from both the supply as well as demand sides, and also separately for inbound and domestic tourism demand. The use of the SUT framework, for each of these impacts, makes the analysis comprehensive. The supply-side impact is estimated through the shock felt by the supplying industries. The supplying industries, which cater to both tourists and non-tourists, suffered losses as many of these had to be kept shut due to the lockdown. The impact of this loss is referred as a supply-side shock. As a matter of fact, the supply-side shock is evident in the GVA numbers of not just the tourism-supplying industries but also in the entire economy, which saw a deep contraction during the first half of 2020–2021, marked by zero activity in all the economic sectors, except agriculture, and essential goods and services.

In addition to this, and more prominently, the tourism economy suffered due to the minimal tourist movement amid the lockdown and travel restrictions, and the resultant fall in tourism demand or tourism expenditure of all types—inbound, domestic, and outbound. Hence, this is the shock resulting from the disruption from the demand side. The drop in the number of inbound, domestic, and outbound tourists in each quarter has been used to estimate the fall in the corresponding tourism expenditure.

The TPRs and TIRs for a quarter, derived by using the calculated reduced demand and supply of each industry, help determine the estimation of TDGVA for that quarter. This article estimates the TDGVA, in real terms, for all the quarters of FY2021. The TDGVA figures, in real terms, have also been estimated for the corresponding quarters of the previous year, in order to obtain the year-on-year percentage change in the TDGVA during 2020–2021. The magnitude of percentage fall in TDGVA indicates the severity of impact of the pandemic on tourism.

## 4. Findings

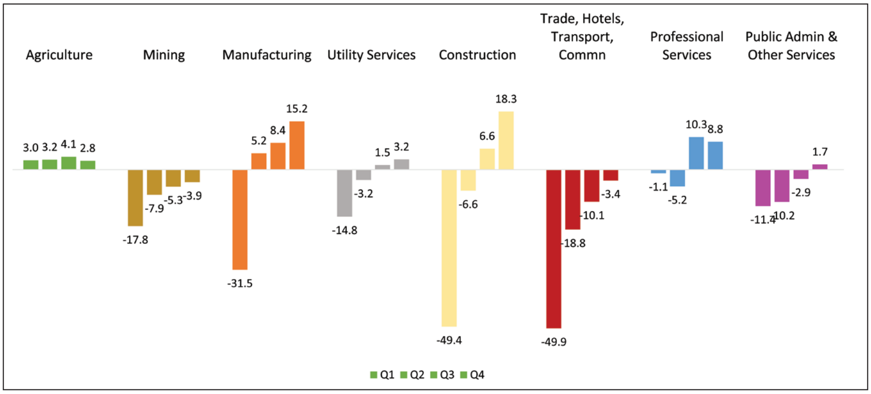
According to the revised estimates of GDP, released in May 2022, the overall economy, in terms of the GVA at constant prices, posted a deep contraction of 21.4 per cent in the first quarter of 2020–2021[1] as compared to 4.4 per cent real growth achieved during the same quarter a year ago (Government of India, National Statistical Office, Press Release, May 31, 2022). This was the worst contraction since India began compiling quarterly GDP data in 1996. As some of the activities started picking up through the second quarter, following various unlocking measures, the overall GVA showed an improvement, though it still posted a negative growth of 5.9 per cent during this quarter. This was followed by a positive growth of 2.1 per cent in the third quarter and a robust 5.7 per cent growth in the fourth quarter, on a low base of 2.7 per cent growth posted in the same quarter of the previous year.

The impact of the pandemic on all the key sectors of the economy, some of which are tourism-related, is also worth noting (Figure 1). It is only the agriculture sector that continued to post positive growth in all the quarters. The manufacturing sector, on the other hand, saw a sharp decline in the first quarter but soon after the unlocking measures were initiated, the sector grew impressively. However, the services sector, of which tourism is a sub-set, remained in negative growth territory for a longer period. The sector, part of which is particularly related to tourism, that is, 'Trade, Hotels, Transport, Communication & Services related to Broadcasting', saw a contraction in all the four quarters.

The impact of the pandemic on the tourism economy is estimated to be far more severe than any of the other economic sectors, as given in Figure 1. As regards assessment of the independent impact of the supply shock, assuming the tourism demand to be at the same level as in the pre-pandemic years, TDGVA estimates show that the railway passenger services suffered the deepest loss in the first quarter, followed by travel agencies, other passenger transport services (water and air), road transport services, other tourism-specific services (cultural, religious, sports and recreational), hotels and restaurants, and tourism-connected goods (clothing, beverages, jewellery, among others) (Figure 2). On an average, the GVA figures for these industries respectively contributed 3.9 per cent (railways), 1.4 per cent (travel agencies), 2.6 per cent (other transport), 24.3 per cent (road), 17.2 per cent (other tourism services), 22.3 per cent (hotels and restaurants), 28.4 per cent (non-tourism-specific services), and almost nil

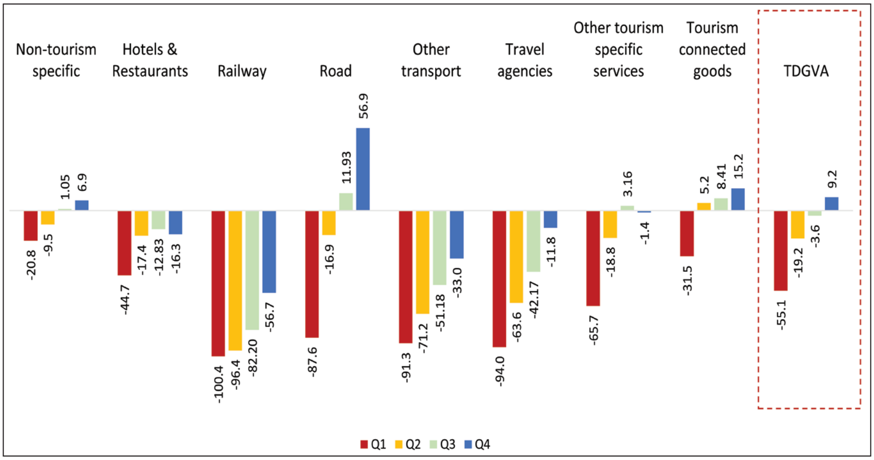
[1] Press Note on Second Advance Estimates of National Income 2020-21 and Quarterly Estimates of Gross Domestic Product for the Third Quarter (Q3) of 2020-21, February 26, *2023*.

**Figure 1 Growth/Decline in Sectoral GVA (Y-o-Y, Per cent)**




**Source:** Ministry of Statistics and Programme Implementation, Government of India.

**Figure 2 Impact of Supply-side Shock on Tourism Industries**




(tourism-connected goods) to the overall TDGVA during the pre-pandemic period of 2015–2016 to 2018–2019.

The overall TDGVA is estimated to have fallen by 55.1 per cent in the first quarter, by 19.2 per cent in the second quarter, by 3.6 per cent in the third quarter, finally showing a rebound in the fourth quarter with a positive real growth of 9.2 per cent. The gradual improvement in the tourism economy, especially the rebound in the fourth quarter of the year, may be attributed to the several unlocking measures taken by the government, like removal of restrictions on travel by train, road, air, and water; enforcement of Standard

Operating Procedures (SOPs) like wearing of masks, making it mandatory for passengers to get tested for the COVID-19 virus before and after any kind of travel; and the onset of the mass vaccination drive, among others. Further, the SOPs adopted by private stakeholders, and the consequent confidence inculcated among the people to travel also led to the revival in tourism activities.

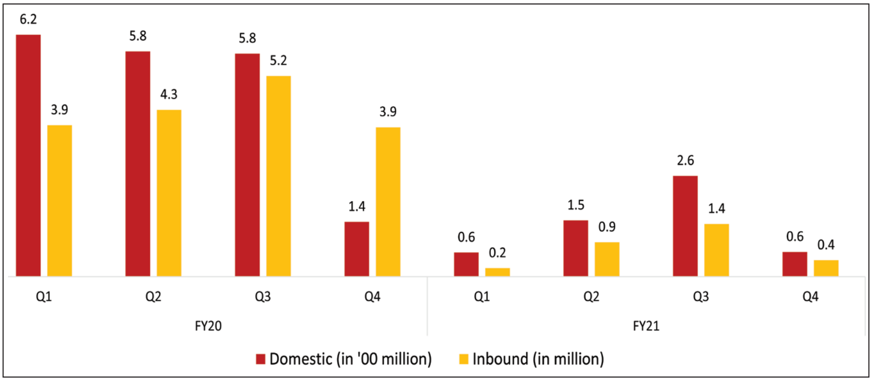
It may be noted that the estimated impact of the pandemic discussed above is based on the performance of tourism-supplying industries only and does not reflect the impact of reduced tourism activity, which is captured in the demand-side shock.

The demand-side shock supplements the supply-side shock, and results from the fall in tourism demand due to restricted tourism activity. Figure 3A shows the number of inbound and domestic tourist arrivals across all quarters of FY2020 and FY2021.

For all the quarters, the tourism demand or tourism expenditure for each product has been derived as the product of the per-tourist expenditure for that product, while the number of tourists and the new TPRs and TIRs have also been derived. Based on these, the TDGVA figures have been estimated for each quarter, which therefore, capture the combined impact of both the supply and demand shocks. Figure 4 presents the impact of the pandemic resulting from both the supply-side and demand-side constraints.

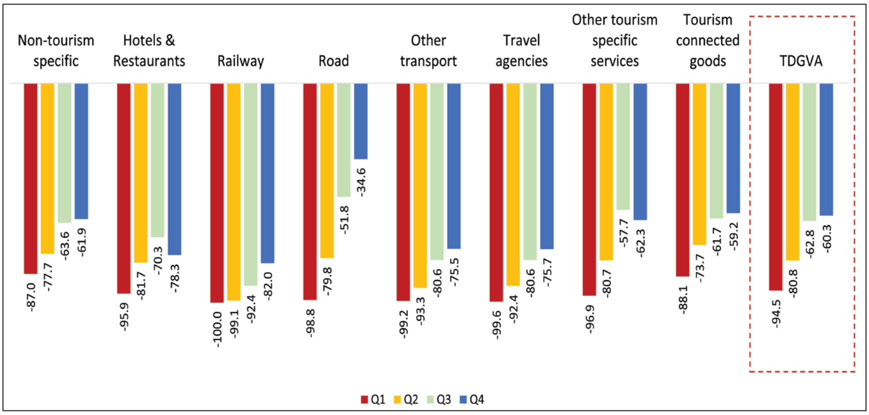
The findings suggest that owing to both supply- and demand-side shocks, the overall TDGVA is estimated to have tumbled by as much as 94.5 per cent during the first quarter of 2020–2021 over its level during the same quarter of the previous year. It continued to remain deep in the negative territory during the subsequent three quarters too.

**Figure 3 Number of Tourist Arrivals in the Country**




**Source:** Ministry of Tourism, Government of India and author's calculations.

**Figure 4 Impact of Both Supply- and Demand-Side Shocks on the Tourism Industries**




This combined impact has also been assessed separately owing to a fall in the inbound and domestic tourism activities. In order to make this assessment, in the first case of analysis, it is assumed that the impact of the pandemic was felt only on inbound tourism while domestic tourism remained the same during the three quarters of this study. This means that the impact of reduction in only inbound tourism expenditure has been taken into account, keeping the domestic tourism expenditure same as at the pre-pandemic level. The TPRs and TIRs have accordingly been derived and the values of the TDGVA have been obtained for all the quarters. In the second case of analysis, it is likewise assumed that the inbound tourism expenditure remained the same while only domestic tourism expenditure suffered the brunt of the pandemic, resulting in a fall in only domestic tourist visits.

## 5. Conclusions

This article highlights the greater importance of domestic tourism as compared to international tourism. The change of focus from the decades-old international tourism marketing campaign of 'Incredible India' to the new '*Dekho Apna Desh*' initiative to boost domestic tourism, is quite apt.

The importance of domestic tourism is evident from the fact that the negative impact of the fall in domestic tourism activity turned out to be far more severe than that of inbound tourism activity, during the pandemic period. The results show that only the Hotels and Restaurants sector gets impacted by the fall in inbound tourism more than the fall in domestic tourism. For all the other

**Table 1 Estimated Fall in TDGVA due to Different Demand Effects**

| | *Inbound Effect* | | | | *Domestic Effect* | | | | *Difference* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Q1* | *Q2* | *Q3* | *Q4* | *Q1* | *Q2* | *Q3* | *Q4* | *Q1* | *Q2* | *Q3* | *Q4* |
| Non-tourism-specific | –49.7 | –40.9 | –33.0 | –28.7 | –84.9 | –75.0 | –60.4 | –57.7 | –35.2 | –34.1 | –27.5 | –29.0 |
| Hotels and Restaurants | –73.9 | –54.4 | –49.3 | –58.1 | –67.8 | –46.5 | –35.8 | –38.3 | 6.1 | 7.9 | 13.5 | 19.8 |
| Railways | –100.4 | –96.7 | –83.7 | –60.8 | –100.1 | –98.8 | –91.1 | –78.4 | 0.3 | –2.2 | –7.5 | –17.5 |
| Road | –88.8 | –23.7 | 3.3 | 42.6 | –97.8 | –73.7 | –44.3 | –21.9 | –9.0 | –50.0 | –47.6 | –64.5 |
| Other Transport | –93.6 | –77.5 | –60.6 | –47.7 | –97.2 | –87.7 | –72.4 | –62.4 | –3.6 | –10.2 | –11.8 | –14.6 |
| Travel Agencies | –96.8 | –78.3 | –64.3 | –50.8 | –97.3 | –81.0 | –63.9 | –44.9 | –0.6 | –2.7 | 0.4 | 5.9 |
| Other Tourism-specific Services | –72.2 | –32.0 | –12.5 | –19.1 | –91.0 | –69.0 | –43.9 | –46.4 | –18.8 | –37.0 | –31.4 | –27.3 |
| Tourism-connected Goods | –56.5 | –33.3 | –31.2 | –26.9 | –88.1 | –73.7 | –61.7 | –59.2 | –31.6 | –40.4 | –30.4 | –32.3 |
| TDGVA | –71.7 | –41.0 | –27.1 | –18.3 | –86.0 | –68.2 | –49.0 | –42.7 | –14.3 | –27.2 | –21.9 | –24.4 |

**Source:** Author's calculations.

industries, it is the other way around. The thrust of policymakers should thus be more on promoting domestic tourism, which has proved to be much more resilient against the abnormalities caused by the COVID-19 pandemic and possibly other such events too. Table 1 presents the industry-wise estimates of TDGVA, as derived for both the cases of analysis.

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