

Unveiling the Gems of India:
Quantifying the Economic Impact of Tourism
on India's GDP (2001-2020)

PETHANI DEEPKUMAR KISHORBHAI

(Student Id: Daiict-202319011)



Indian Institute of Remote Sensing

(M.Sc. Agriculture Analytics)

Module Name: - Programming for Geodata Processing

ABSTRACT

This project includes an analysis of Indian Tourism Sector and Contribution to GDP, how Indian GDP reacts towards the tourism with the help of python programming with using of NumPy, matplotlib, seaborn, Pyplot and panda's library functions and Geo data processing library like Geopandas.

Indian tourism data over 2000 to 2020 taken from the website of Government of India, Ministry of Tourism, Indian tourism statistic at a glance – 2020 & 2021, World Data Bank, Statista – The Statistics Portal.

According to data from the Indian government, Research Questions like: Arrival of International Tourist (FTAs) relation with Earnings ? What is the Domestic Market of Tourism? Foreign Exchange Earnings (FEEs) through tourism and the contribution of GDP by tourism?

In The year 2020 was a pandemic year, With All restrictions in tourism sector, only 2.74 million tourist arrivals resulting India Experienced a drastic 74.9% decline over past year. However, India's share in total International Tourist Arrivals was 1.57% and in Asia Pacific Region was 10.67% during the year 2020. Further, because most of the tourist destinations were closed in the year due to pandemic, India observed domestic tourist visits of 610.22 million and foreign tourist visits of 7.17 million only in 2020.

India's travel and tourism sector: Steering towards a brighter future. Tourism to contribute **\$512 bn** to India's **GDP** by **2028**, says **TAAI** chief.

According to Times of India, recently In February, will launch 126 hospitality sector projects worth Rs 3,800 crore in **AYODHYA**.

In **LAKSHADWEEP**, comprising a total of 36 islands, including ten inhabited ones, the administration has recently proposed additional tourism projects. Government-led tourism activities on Lakshadweep.

1. Introduction and Datasets:

❖ **Data Source:** - I get data from authentic source of government of India's department, website of Government of India, Ministry of Tourism, Indian tourism statistic at a glance – 2020 & 2021, World Data Bank, Statista – The Statistics Portal. And article from Times of India Over 2001 to 2020.

❖ **Data Source link:** -

I. Air-transport & Rail-transport data (Passengers Data)

 Link:

<https://databank.worldbank.org/reports.aspx?source=2&series=IS.RRS.GOOD.MT.K6&country=IND#>

II. Country wise FTAs & State wise Domestic Tourists Data

 Link :-


<https://tourism.gov.in/sites/default/files/2022-09/India%20Tourism%20Statistics%202021%20%281%29.pdf>

III. Indian FEEs

 Link :-

<https://tourism.gov.in/sites/default/files/2022-09/India%20Tourism%20Statistics%20at%20a%20Glance%202021%20%281%29.pdf>

IV. Tourism GDP & Overall India GDP

 I got data from Statista – The Statistics Portal. And article from Times of India. I make csv and put data manually from the website.

Data set contains,

1) Air-transport & Rail-transport data (Passengers Data) :

- International (Flights) and Domestic (Trains) Passengers details from 2001 to 2020. For each year there are count of passengers.

2) Country wise FTAs & State wise Domestic Tourists Data :

- There are top 10 country which has highest arrivals of tourists.
- For each states have total no of international and domestic count of tourists

3) Indian FEEs (Foreign Exchange Earnings) :

- There is FEE from Tourism in India (in US \$ million).
- In second column, Percentage (%) change over the previous year.

4) Tourism GDP & Overall India GDP

- Contain GDP in Millions and in percentage (%)

❖ Hypothesis: -

- In economic way, impact of tourism on India's GDP has been significant and positive over the period 2001-2020.
- According to the article great investment comes for Tourism sector.
- From the article, we can say contribution by tourism sector is increase in GDP growth, foreign exchange earnings, employment, and investment.

❖ Data Filtering: -

In data set, I download 1965 to 2020 time period data. So, I clean garbage data first with using of pandas data frame. Then some data frame joined, and some are drop.

For total passenger, I do sum both column air and train passengers. Same work done with tourist data frame.

❖ Research Questions: -

News Article: - Articles taken from Times of India.

❖ Claim: -

- 1) India's travel and tourism sector: Steering towards a brighter future.
Tourism to contribute **\$512 bn** to India's **GDP** by **2028**, says **TAAI** chief.

Link :- <https://timesofindia.indiatimes.com/blogs/voices/indias-travel-and-tourism-sector-steering-towards-a-brighter-future/>

- 2) As reported by Times of India on 13 January 2024, In AYODHYA - 126 tourism projects worth Rs 3,800 crore to be launched. The four largest investments in the district.

Link :- <https://timesofindia.indiatimes.com/city/lucknow/126-tourism-projects-worth-rs-3800-crore-to-be-launched-in-ayodhya-next-month/articleshow/106795023.cms>

- 3) In LAKSHADWEEP, comprising a total of 36 islands, including ten inhabited ones, the administration has recently proposed additional tourism projects. Government-led tourism activities on Lakshadweep.

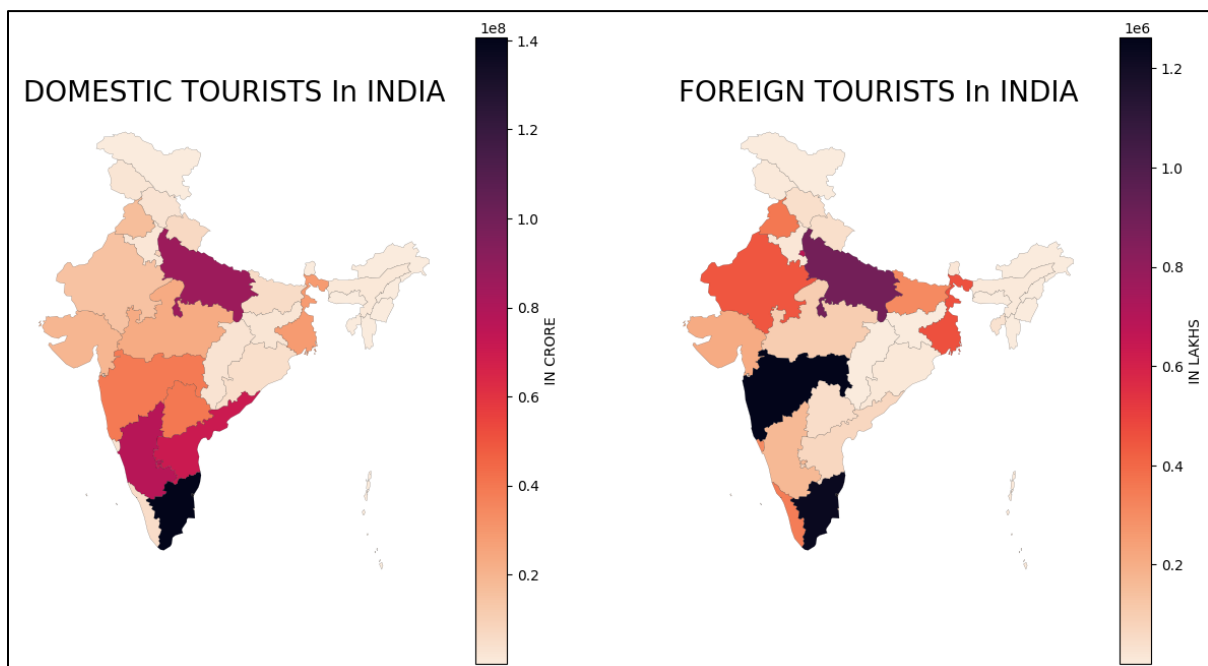
Link :- <https://timesofindia.indiatimes.com/india/lakshadweeps-tourism-grows-with-new-proposals-for-development/articleshow/106665109.cms>

➤ Research Question:-

- How do the economic impacts of domestic and foreign tourism differ across different regions in India?
- What is the distribution of your data?
- What is the percentage change in the foreign exchange earnings (FEE) in Rs. core from tourism in India, 2001-2020?
- How affects tourism GDP to Indian Economy (Overall GDP)
- Which country has the highest share of international tourism receipts?

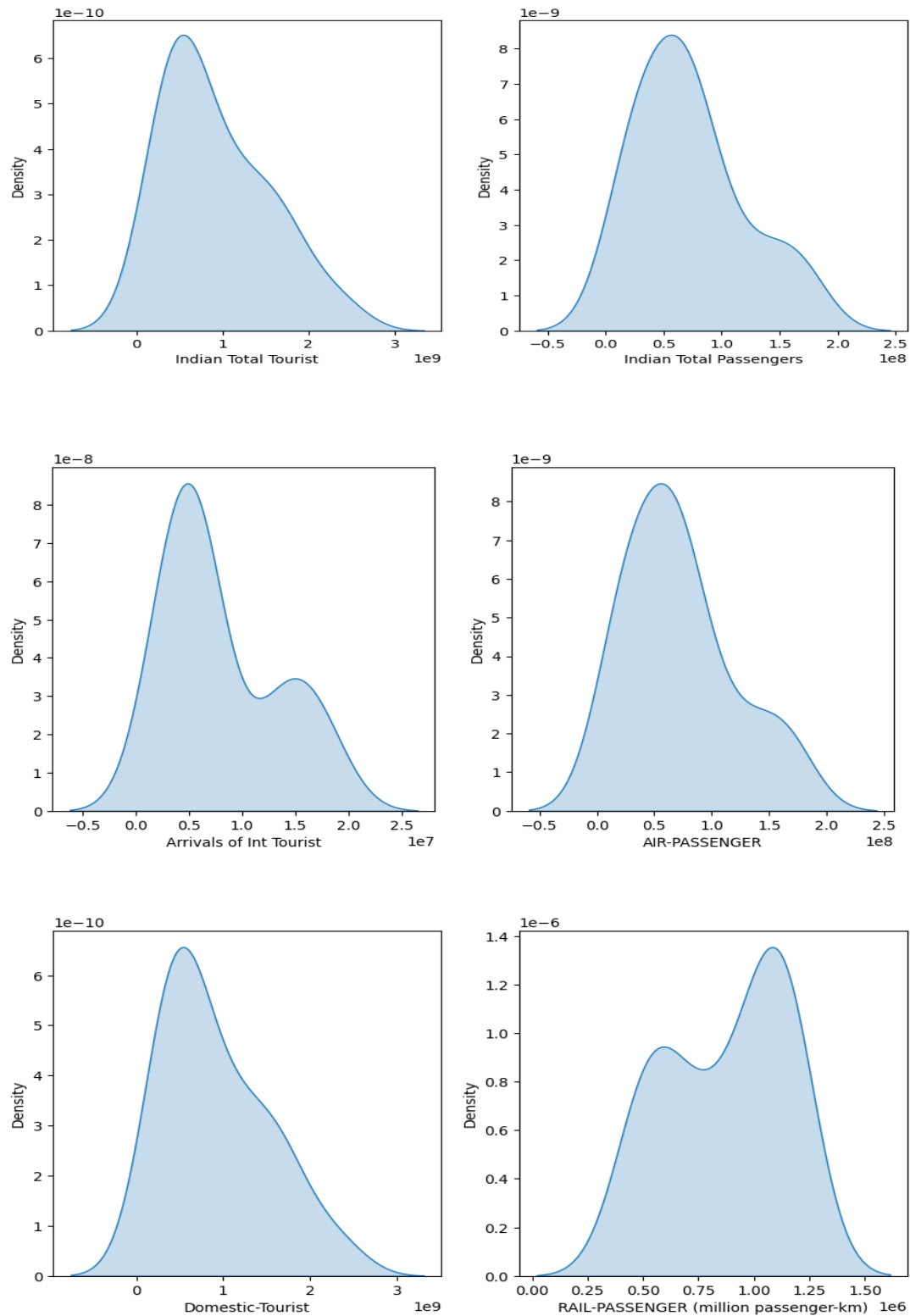
❖ Analysis: -

1) How do the economic impacts of domestic and foreign tourism differ across different regions in India?



- I. Highlighting Tourist Hotspots
- II. This plot Describe the overall distribution of domestic vs. foreign tourist arrivals across different states in India.
- III. More number of tourists direct impacts on Indian economy, so dark states contribute more as compared to others.
- IV. It helps to identifying on where to invest and improve tourism sector.

2) What is the distribution of your data?

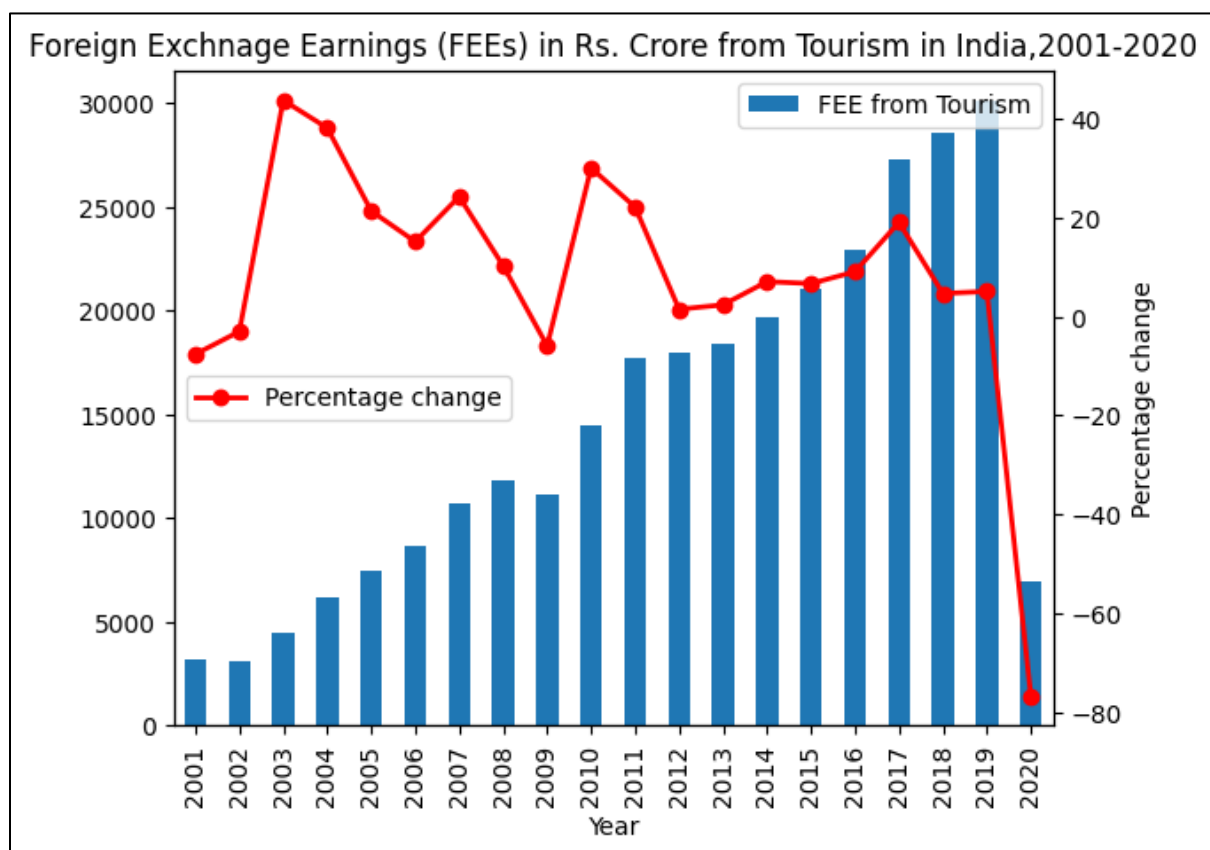


Here, the probability density distribution of all data sets.

It helps to find --

- I. Help to visualize the likelihood of different values occurring.
- II. They compare distributions from different time periods to different groups.
- III. Skewness and pattern can reveal important information.

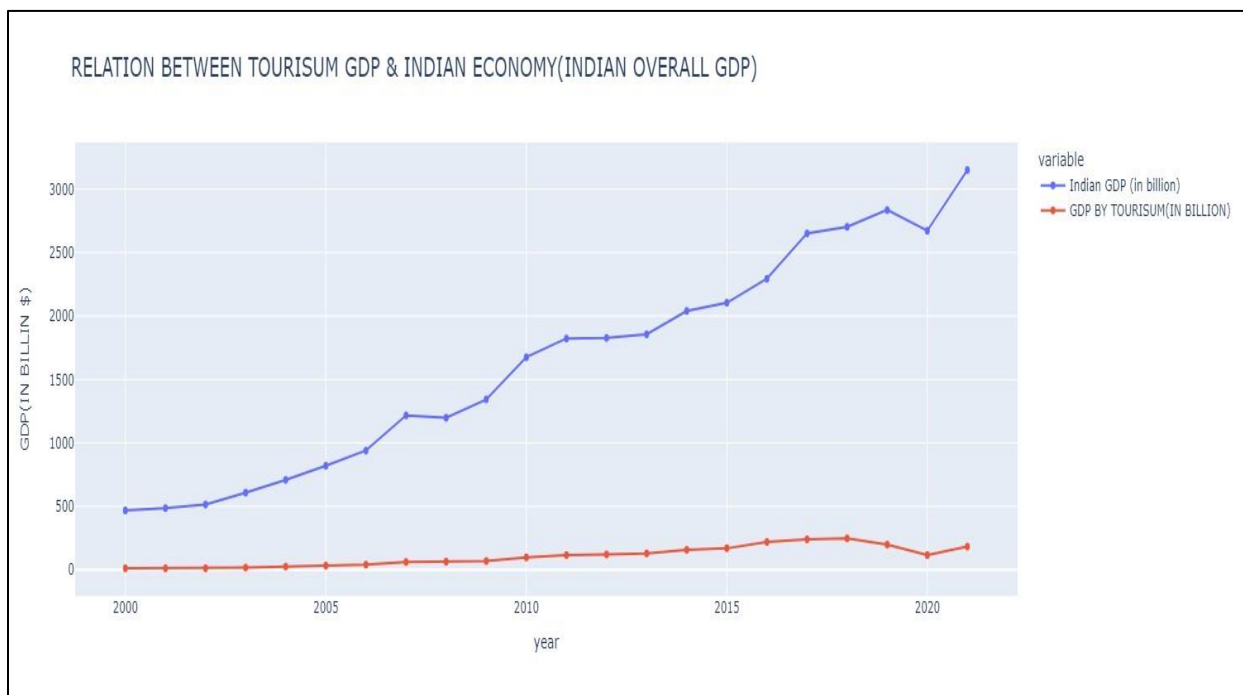
3) What is the percentage change in the foreign exchange earnings (FEEs) in Rs. core from tourism in India, 2001-2020?



➤ Here, Bar shows FEEs and Line chart shows change of percentage(%)

- I. From 2001 to 2020 Foreign Earning Exchange increase rapidly and change of percentage over the years do not differ very. Its indicates that contribution of tourism to Indian economy is plays major roles.
- II. Rapidly downfall indicates the crisis of corona in India. In that time All restrictions in tourism sector are followed, only 2.74 million tourist arrivals resulting India Experienced a drastic 74.9% decline over past year.

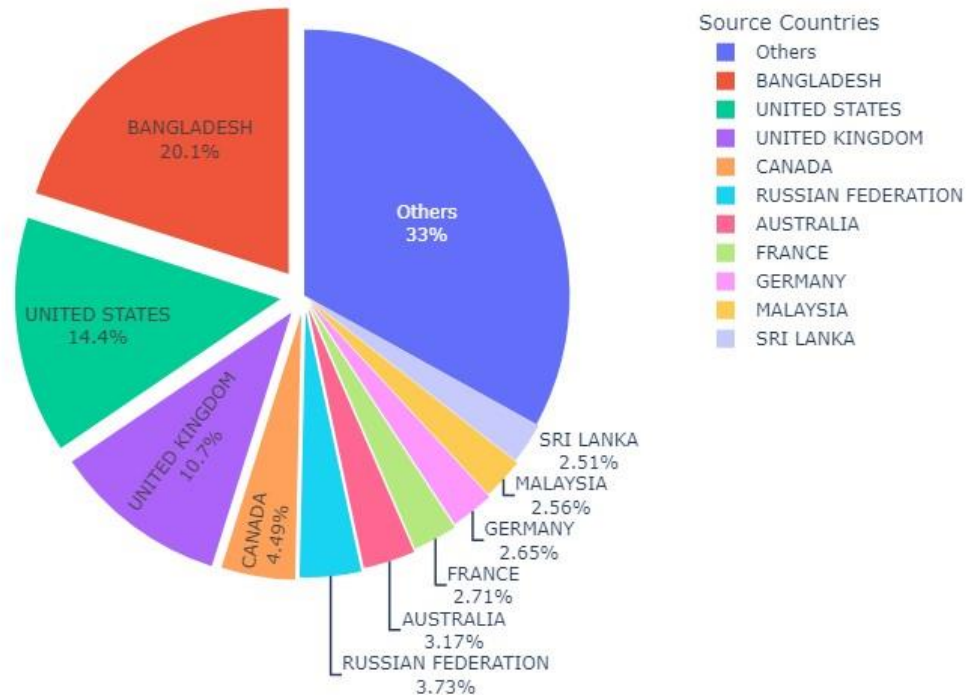
4) How affects tourism GDP to Indian Economy (Overall GDP)



- Over the time contribution of tourism increase Fastly, which means tourism sector growing fast in India and it helps to improve gov for developing the country.
- But we cannot say that tourism is much affect the Indian economy.

5) Which country has the highest share of international tourism receipts?

Share of Top Countries in International Tourism Receipts



Conclusion : -

- As per the reports, we will say that from 2001 to 2020 Indian Economy and contribution of tourism was increasing rapidly. So we will proudly say that in future Indian GDP and Tourism sector touches new Skys.

“India’s travel and tourism sector: Steering towards a brighter future. Tourism to contribute **\$512 bn** to India’s **GDP by 2028**, says **TAAI** chief.”

- Recently announced by gov to develop LAKSHADWEEP island and improve tourism which is triggered tourism sector.

“In LAKSHADWEEP, comprising a total of 36 islands, including ten inhabited ones, the administration has recently proposed additional tourism projects. Government-led tourism activities on Lakshadweep.”

- Indian tramples play major role in increasing tourism sector

“AYODHYA – RAM MANDIR Pran Pratishtha”

REFERENCES

- Air-transport & Rail-transport data (Passengers Data)

✚ Link:

<https://databank.worldbank.org/reports.aspx?source=2&series=IS.RRS.GOOD.MT.K6&country=IND#>

- Country wise FTAs & State wise Domestic Tourists Data

✚ Link :-

<https://tourism.gov.in/sites/default/files/2022-09/India%20Tourism%20Statistics%202021%20%281%29.pdf>

- Indian FEEs

✚ Link :-

<https://tourism.gov.in/sites/default/files/2022-09/India%20Tourism%20Statistics%20at%20a%20Glance%202021%20%281%29.pdf>

- Tourism GDP & Overall India GDP

✚ I got data from Statista – The Statistics Portal. And article from Times of India. I make csv and put data manually from the website.

- News Articles

✚ <https://timesofindia.indiatimes.com/blogs/voices/indias-travel-and-tourism-sector-steering-towards-a-brighter-future/>

✚ <https://timesofindia.indiatimes.com/city/lucknow/126-tourism-projects-worth-rs-3800-core-to-be-launched-in-ayodhya-next-month/articleshow/106795023.cms>