



Assignment

GDP Analysis

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Problem Statement:

Part-I: GDP Analysis of Indian States:

- **Part1A:** Need to Analyze the growth rate of GDP of Indian States & Union Territories to get an overview on the performance of each states and union territories.
- **Part1B:** Need to Analyze Total contribution of Primary, Secondary, Tertiary sectors to India's GDP (State-wise). Also differentiate the sector into 4 categories and analysis their Contribution to Indian states based on the per capita GDP.

Part-II: GDP and Education Drop-out Rates:

Here, we need to analyze and showcase the relationship between dropout rates in each education level and per capita GDP is investigated.

PART 1 A: Average Growth of the States



Below we have plotted the Average Growth of States

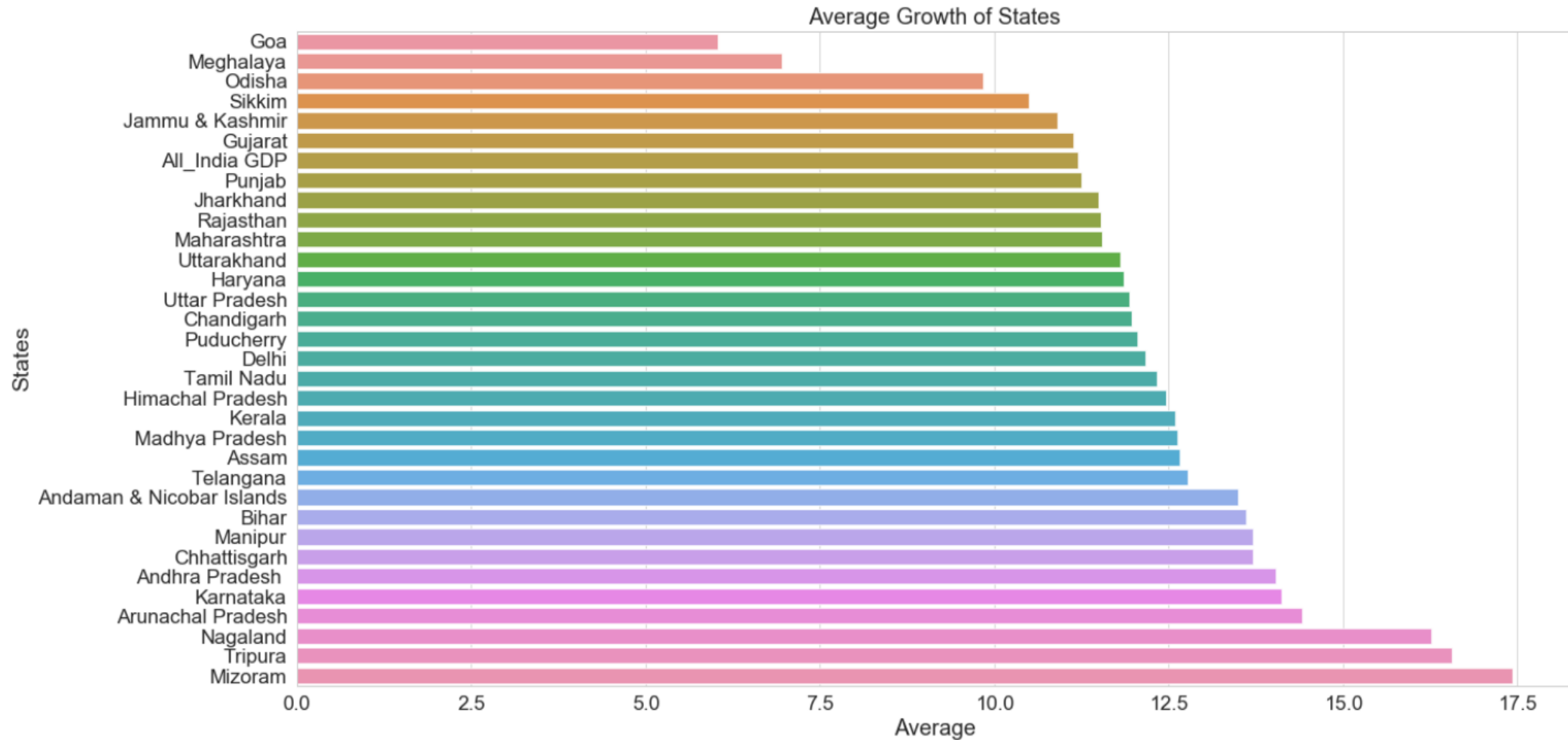


Fig. 1

1. Which states have been growing consistently fast, and which ones have been struggling?

As shown in figure 1, below are the 5 growing and struggling states:

- a. Consistently fast growing states : Mizoram, Tripura, Nagaland, Arunachal Pradesh, Chhattisgarh.
- b. Struggling states : Goa, Meghalaya, Odisha, Sikkim, Jammu & Kashmir.

2. What has been the average growth rate of your home state, and how does it compare to the national average over this duration?

Referring to figure 1, the Average Growth rate of State Maharashtra is 11.54%. In comparison with National Average Growth (i.e. 11.20%) Maharashtra's average Growth rate is lesser than 0.33%.

Total GDP of states for year 2015-16:

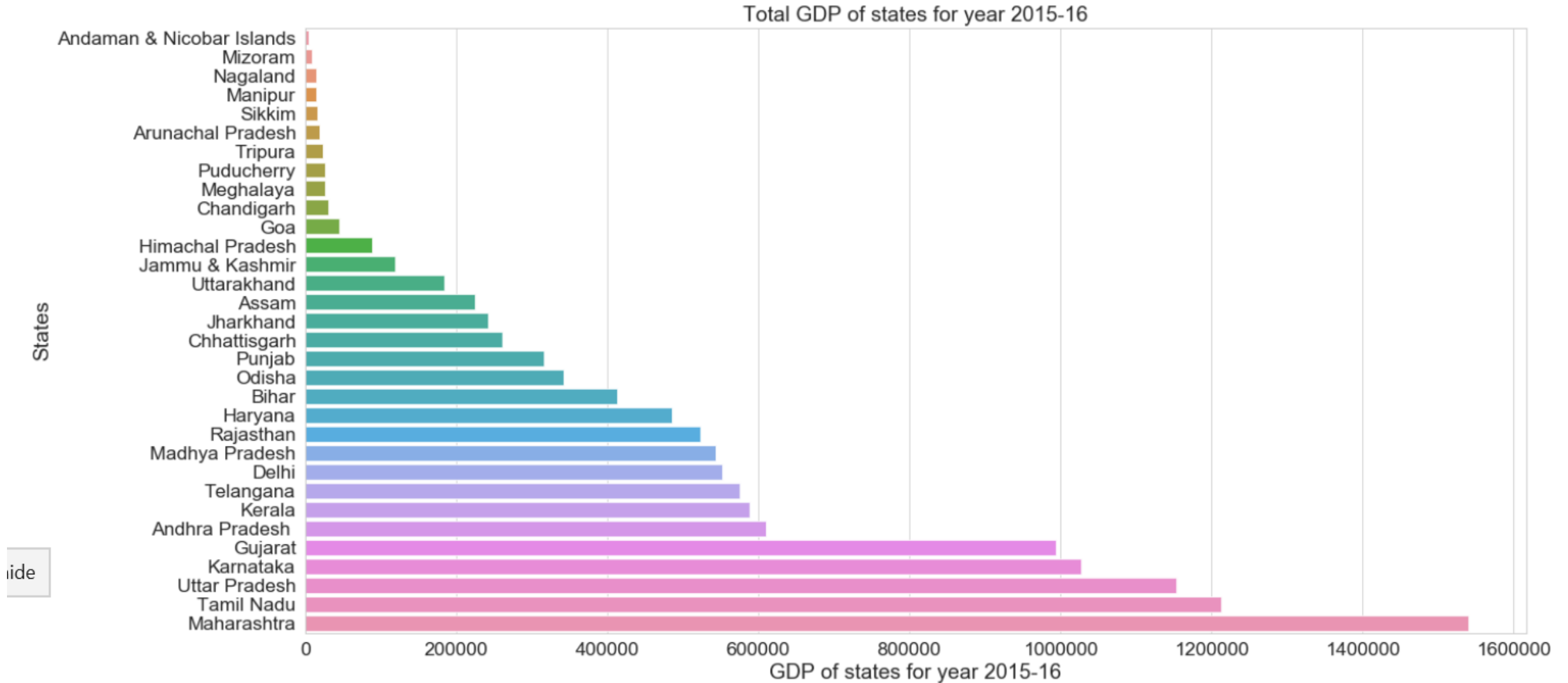


Fig. 2

Identifying the top-5 and Bottom-5 states based on total GDP.

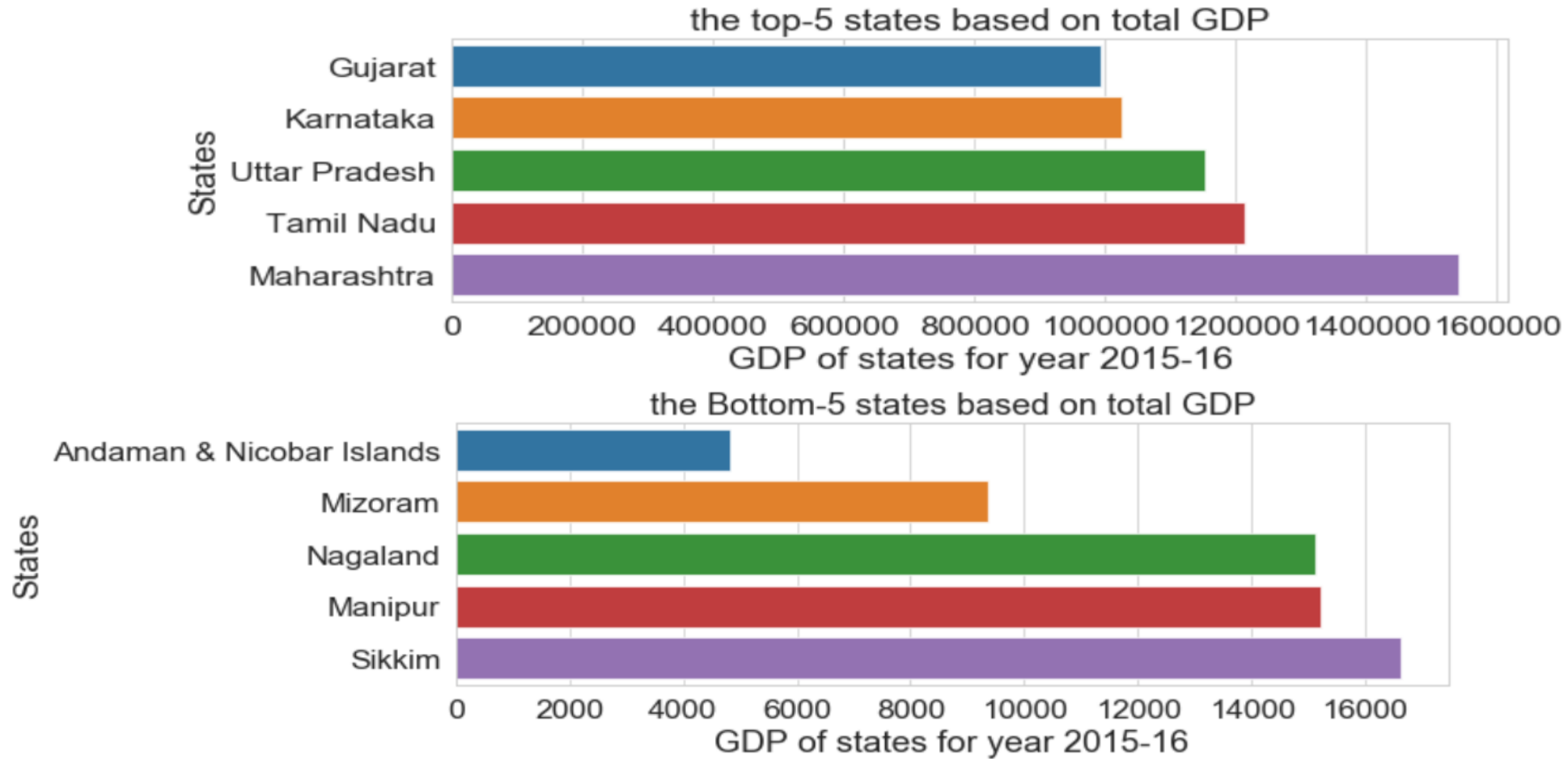


Fig. 3

According to the above fig. the top-5 and the bottom-5 states based on total GDP.

Top 5 States:

- Maharashtra
- Tamil Nadu
- Uttar Pradesh
- Karnataka
- Gujarat

Bottom 5 States:

- Andaman & Nicobar Islands
- Mizoram
- Nagaland
- Manipur
- Sikkim

Part 1 B : GDP per capita for all the states

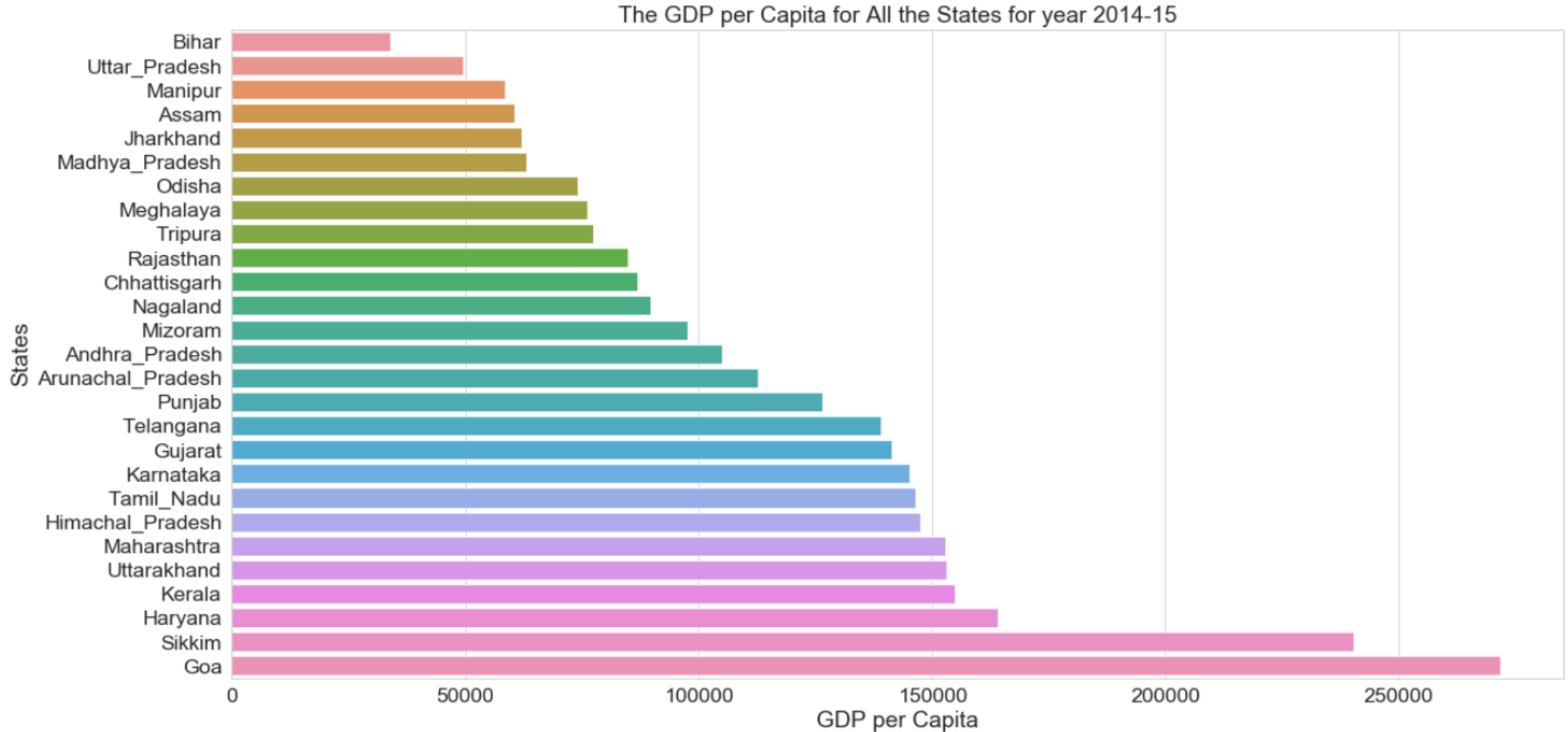


Fig. 4

The Top-5 And The Bottom-5 States Based On GDP Per Capita

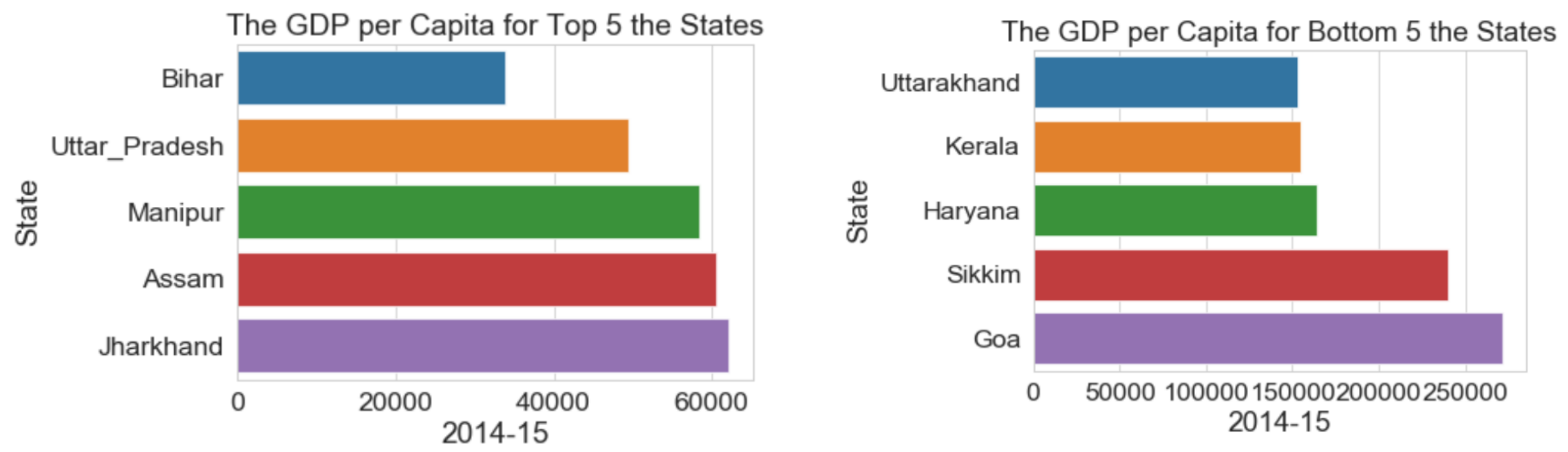


Fig. 5

1. Identify the top-5 and the bottom-5 states based on GDP per capita.

As shown in the above figure 5, the Top 5 and Bottom 5 States based on GDP per Capita are listed below:

a. Top 5:

- i. Goa
- ii. Sikkim
- iii. Haryana
- iv. Kerala
- v. Uttarakhand

b. Bottom 5:

- i. Bihar
- ii. Uttar Pradesh
- iii. Manipur
- iv. Assam
- v. Jharkhand

2. Find the ratio of highest per capita GDP to the lowest per capita GDP.

→ The ratio of Highest per capita to Lowest per capita value is **271793:33954**

Percentage contribution of primary, secondary and tertiary sectors as a percentage of total GDP for all the states.

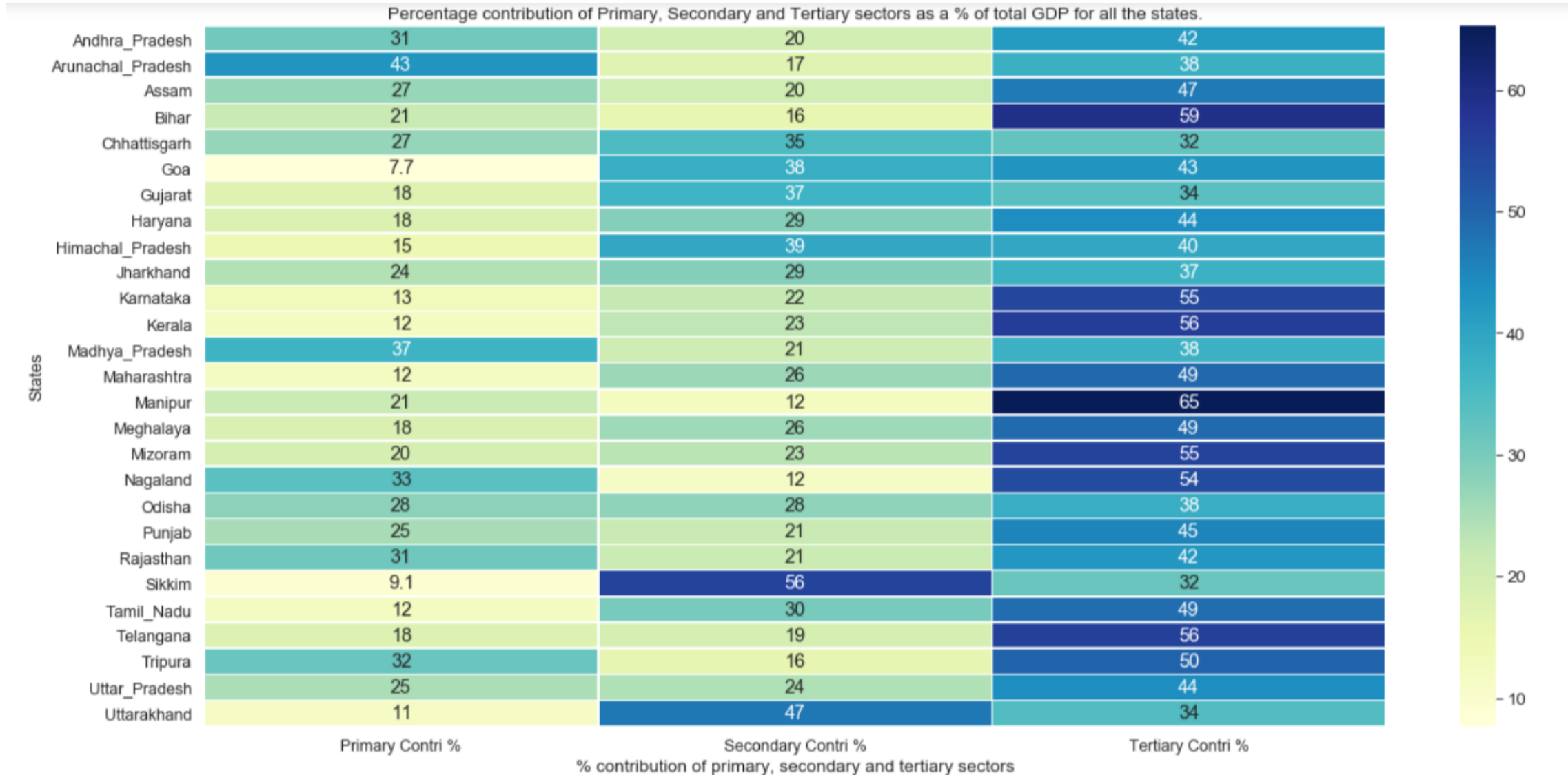


Fig. 6

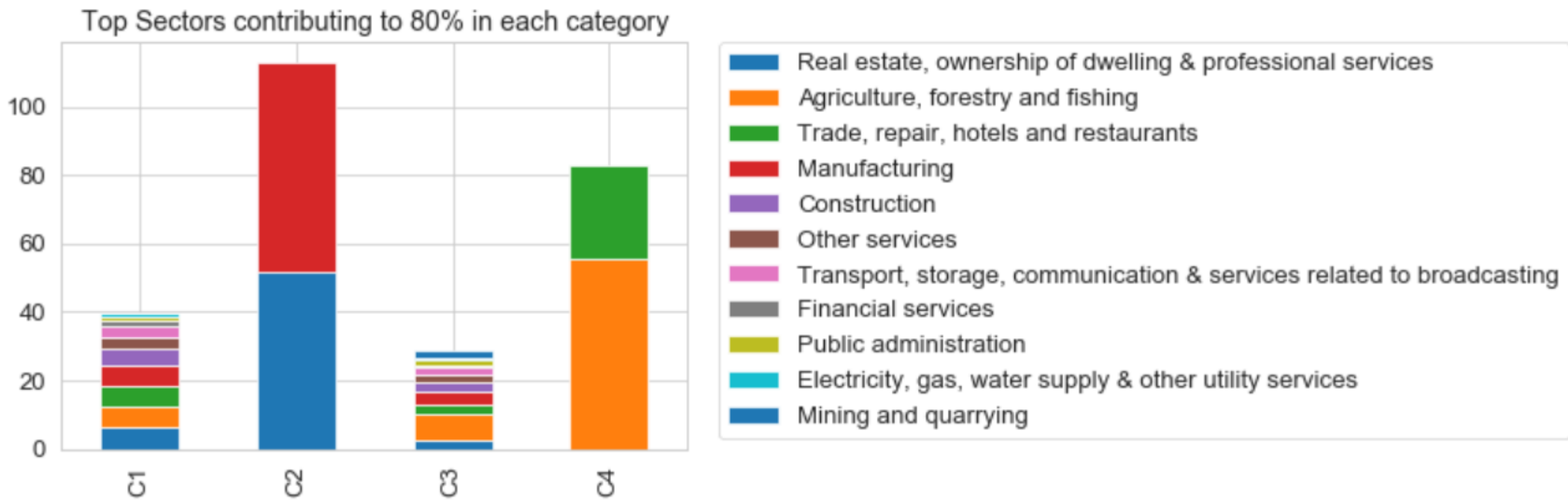
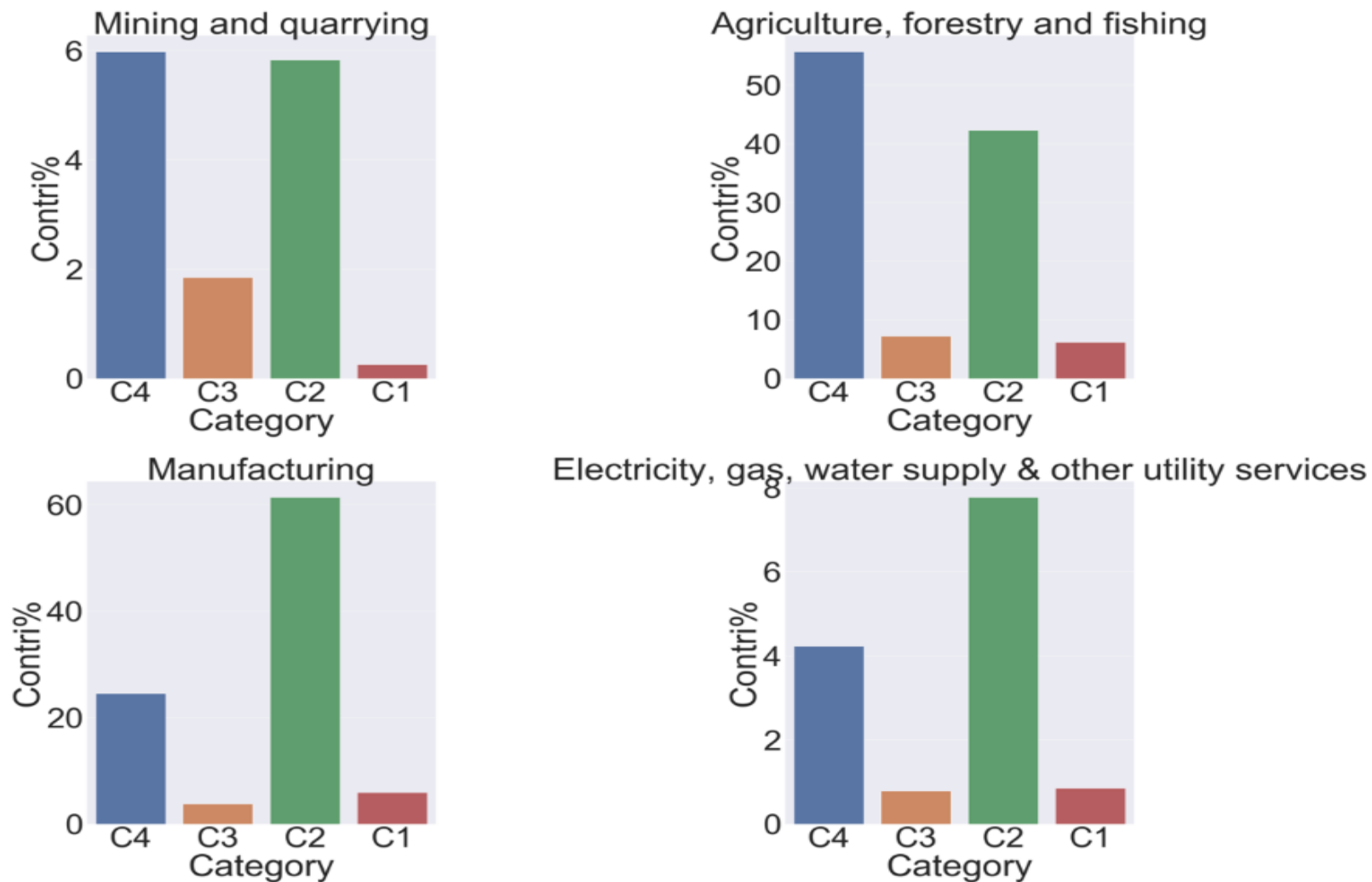
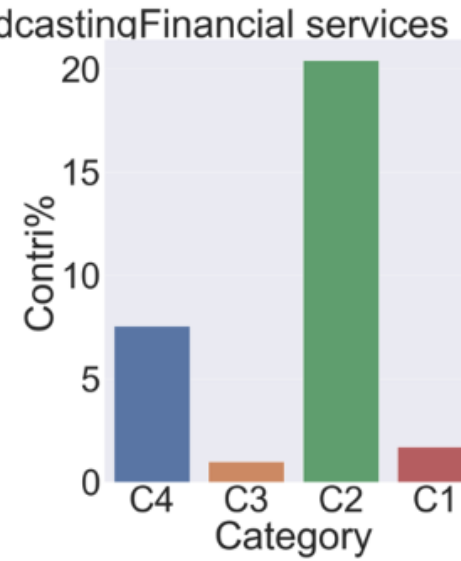
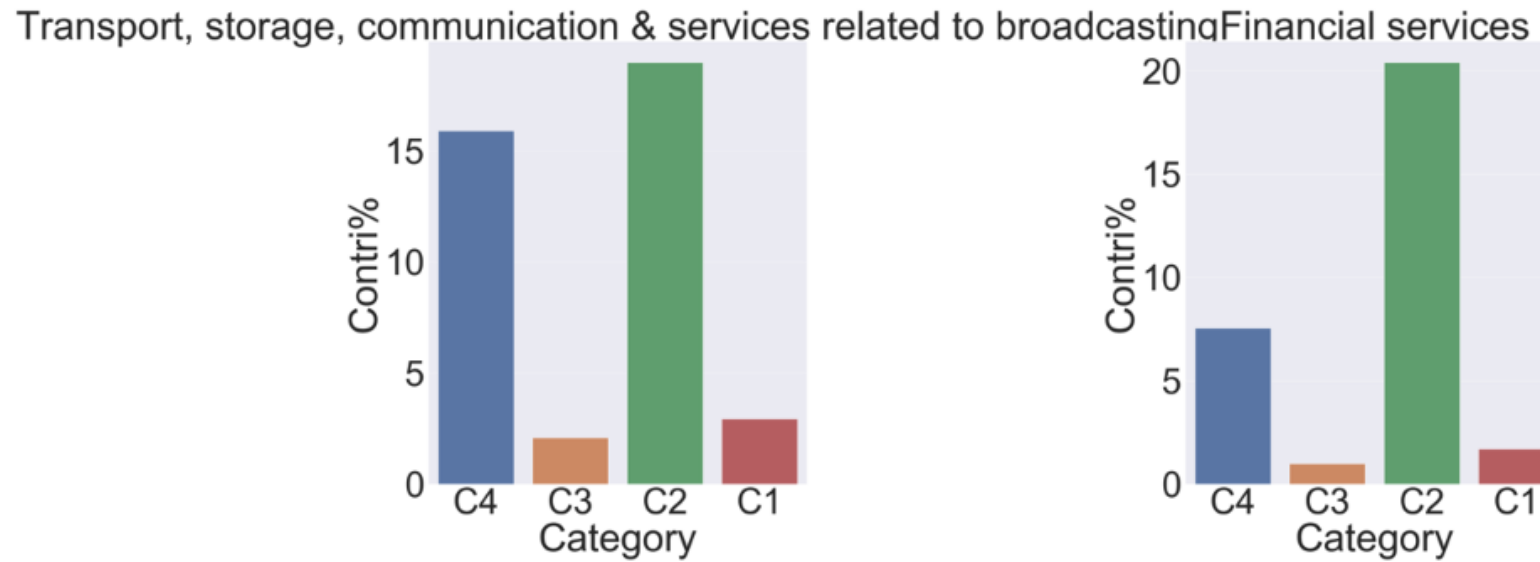
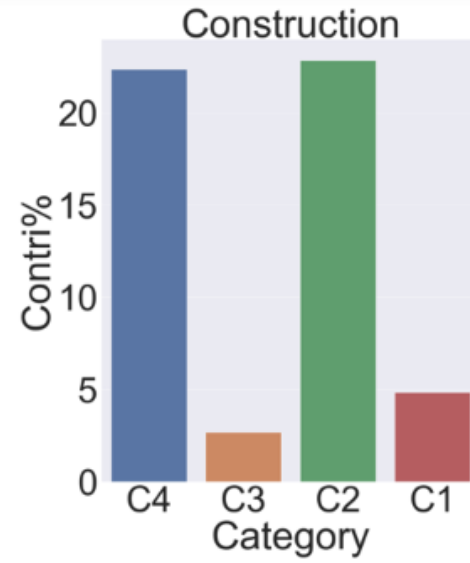


Fig. 7

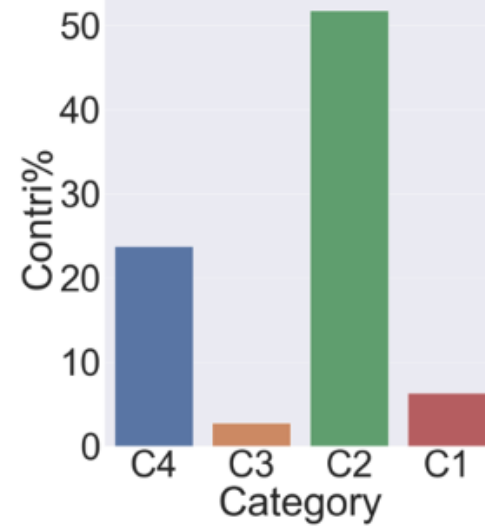
The Contribution Of The Sub-sectors As A Percentage Of The GSDP Of Each Category

Fig. 8

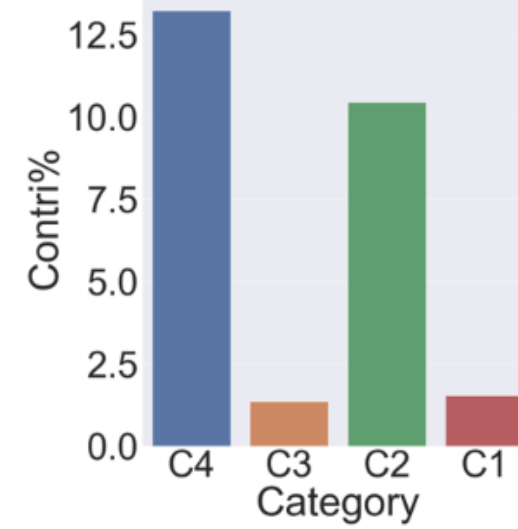




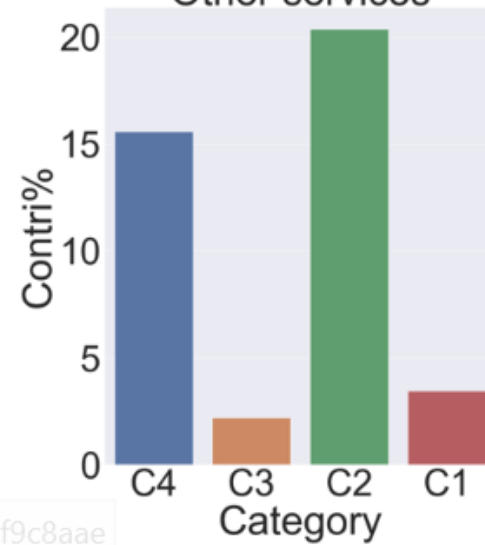
Real estate, ownership of dwelling & professional services



Public administration



Other services



The above bar plot (Figure 8) shows the contribution of the sub-sectors as a percentage of the GSDP of each category.

Observations:

We have total 11 sub sectors, where in the Category C2 and C4 tends to contribute maximum percentage of the GSDP as compared to C1 and C3 in each sub-sectors.

Referring the figure. 7, where we have a **Stacked Bar plot** showing “**the Top sectors contributing total of 80% of the GSDP**”.

- For Category 4, Top Sub-Sectors that are contributing for almost 80% of the total GDP are:
 - Agriculture,
 - Trade and Repair,
 - Manufacturing,
 - Other Services,
 - Construction,
 - Real Estate , ownership etc.

- For Category 3, Top Sub-Sectors that are contributing for almost 80% of the total GDP are:
 - Agriculture,
 - Manufacturing,
 - Trade and Repair,
 - Other Services,
 - Public Administration,
 - Construction.
- For Category 2, Top Sub-Sectors that are contributing for almost 80% of the total GDP are:
 - Agriculture,
 - Manufacturing,
 - Real Estate and ownership,
 - Trade and Repair,
 - Other Services,
 - Construction.

- For Category 1, Top Sub-Sectors that are contributing for almost 80% of the total GDP are:
 - Manufacturing,
 - Agriculture,
 - Real Estate and ownership,
 - Trade & Repair etc.
 - Construction,
 - Other Services.

Two Recommendations to Increase the GDP per capita :

1. In Category 1, the main focus is in Manufacturing , if the focus is slightly shifted to other sub sector like , Agriculture and Real Estate, the per capita GDP may increase
2. If the same strategy is carried out in Category 2 and Category 3 , then also the per capita GDP would rise.

Correlation Of GDP Per Capita With Dropout Rates In Education (Primary, Upper Primary And Secondary) For The Year 2014-2015 For The States

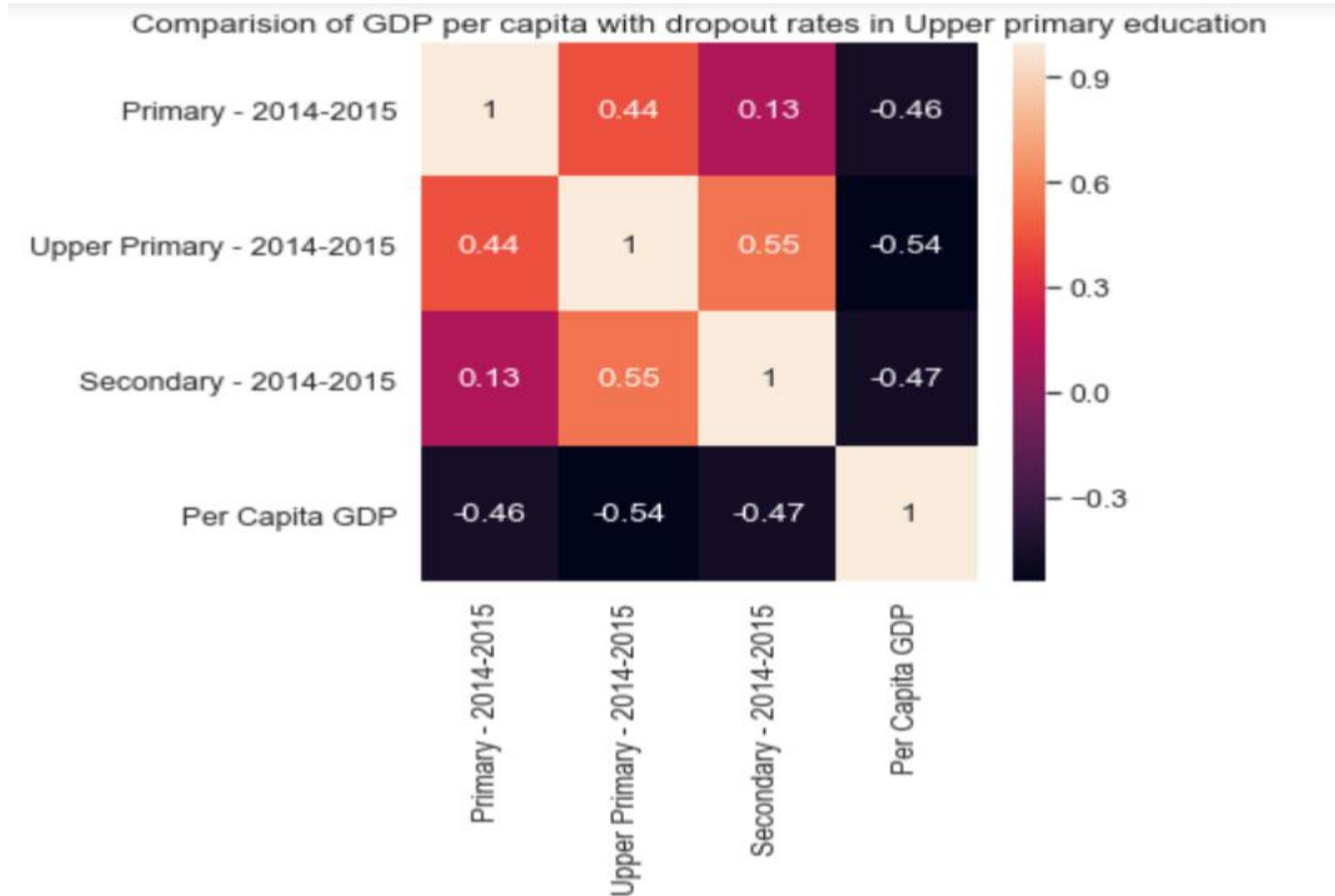


Fig. 9

Referring the above HeatMap, we can say that the Dropout rate increases as the GDP Per Capita decrease.

Hypothesis :

1. Dropout rates affecting the GDP as education may lead to increase the percentage of in getting Jobs is higher Sector.
2. Per Capita GDP is affecting the by Dropout rate

====Thank You=====