

GDP Analysis Assignment

Part-I: GDP Analysis of Indian States

Part I-A: Average growth of states over 2013-14, 2014-15, 2015-16 and total GDP of states over 2015-16

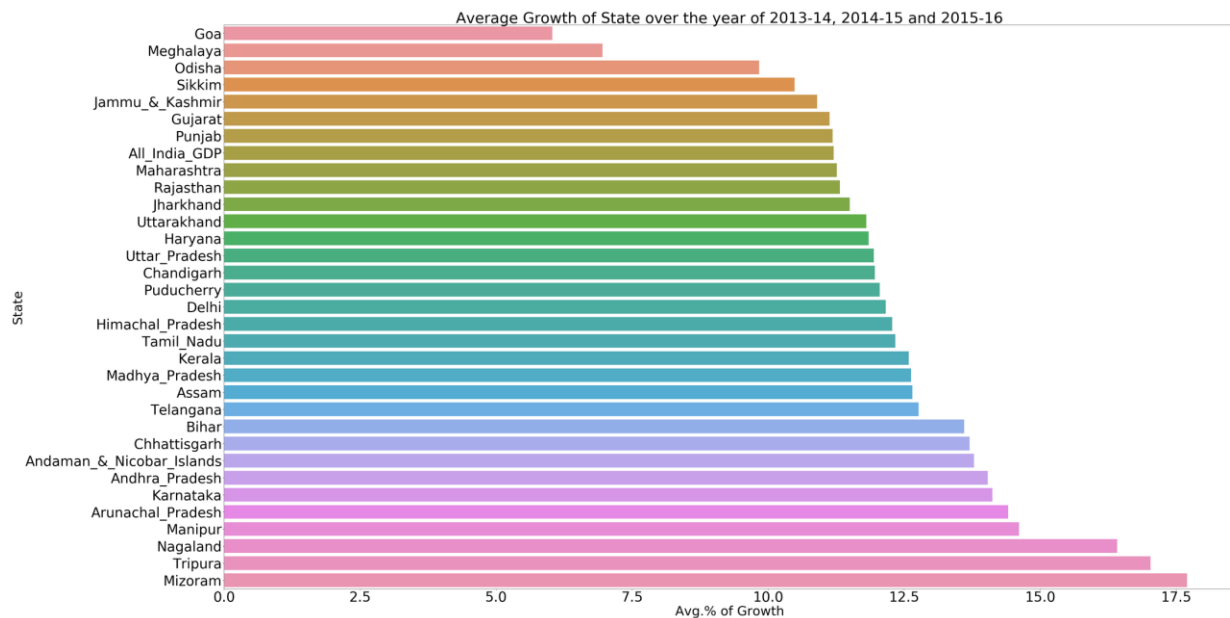
Data: Data I-A (includes States and UT)

Data Cleaning Procedures followed:

1. Stripping the column names with trailing spaces and concatenation with underscore (_) wherever applicable.
2. Dropping the columns where all the rows have NaN values.
3. Dropping the rows wherever applicable as mentioned in the problem statement.

Findings:

Average Growth of State over the year of 2013-14, 2014-15 and 2015-16



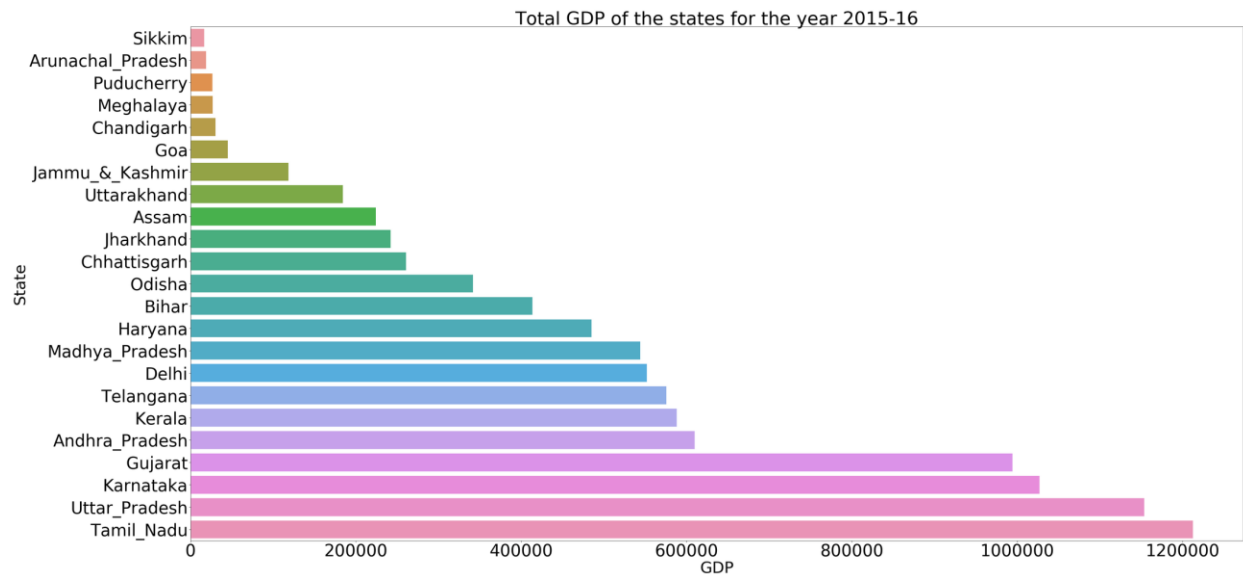
Assumption:

The mean showed above indicates the growth of the states over 3 years.

Insights:

Mizoram shows constant growth that is quite higher than average growth of India, where Goa shows a stagnant one compared to other states.

Total GDP of the states for the year 2015-16



Insights:

During the 2015-16 time-period, Tamil Nadu tops in parameter of total GDP, where Sikkim shows the lowest one. Below is the list of top and bottom 5 here:

Top five states:

1. Tamil Nadu
2. Uttar Pradesh
3. Karnataka
4. Gujarat
5. Andhra Pradesh

Lowest five states:

1. Sikkim
2. Arunachal Pradesh
3. Puducherry
4. Meghalaya
5. Chandigarh

Part I-B: Per Capita GDP, State Categorization, Sector & sub- sector wise percentage contribution

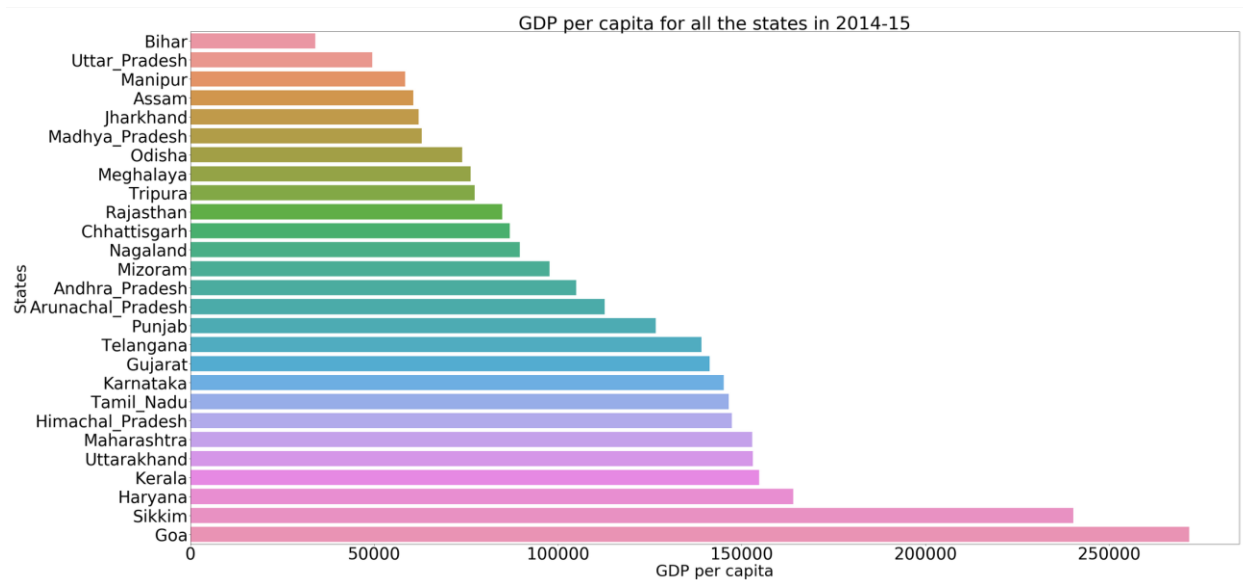
Data: Data I-B (All the calculation in Part I-B is over the period of 2014-15, doesn't include UT)

Data Cleaning Procedures followed:

1. Fixing item names with asterisks (*) to keep it uniform for all the states.
2. Dropping the columns, filtering the rows wherever applicable as mentioned in the problem statement.

Findings:

GDP per capita for all the states in 2014-15



Insights:

It clearly shows that Goa (271793.0) tops in GDP per capita scale during the period of 2014-15, whereas Bihar (33954.0) takes the bottom place in the list. It was found that Goa has almost 8 times GDP per capita compared to Bihar. Here are top and lowest five states mentioned below:

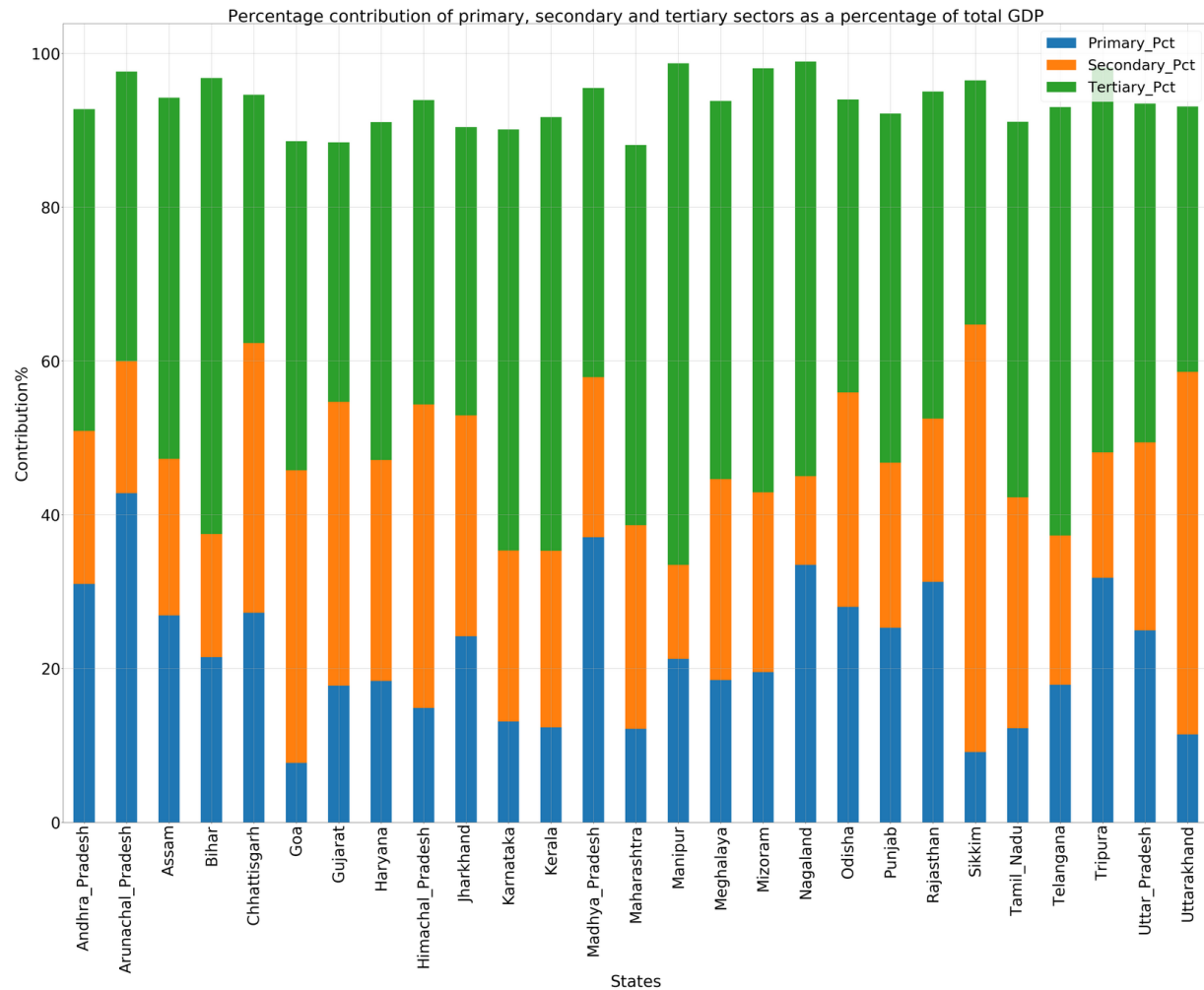
Top five states:

1. Goa
2. Sikkim
3. Haryana
4. Kerala
5. Uttarakhand

Lowest five states:

1. Bihar
2. Uttar Pradesh
3. Manipur
4. Assam
5. Jharkhand

Percentage contribution of primary, secondary and tertiary sectors as a percentage of total GDP



Insights:

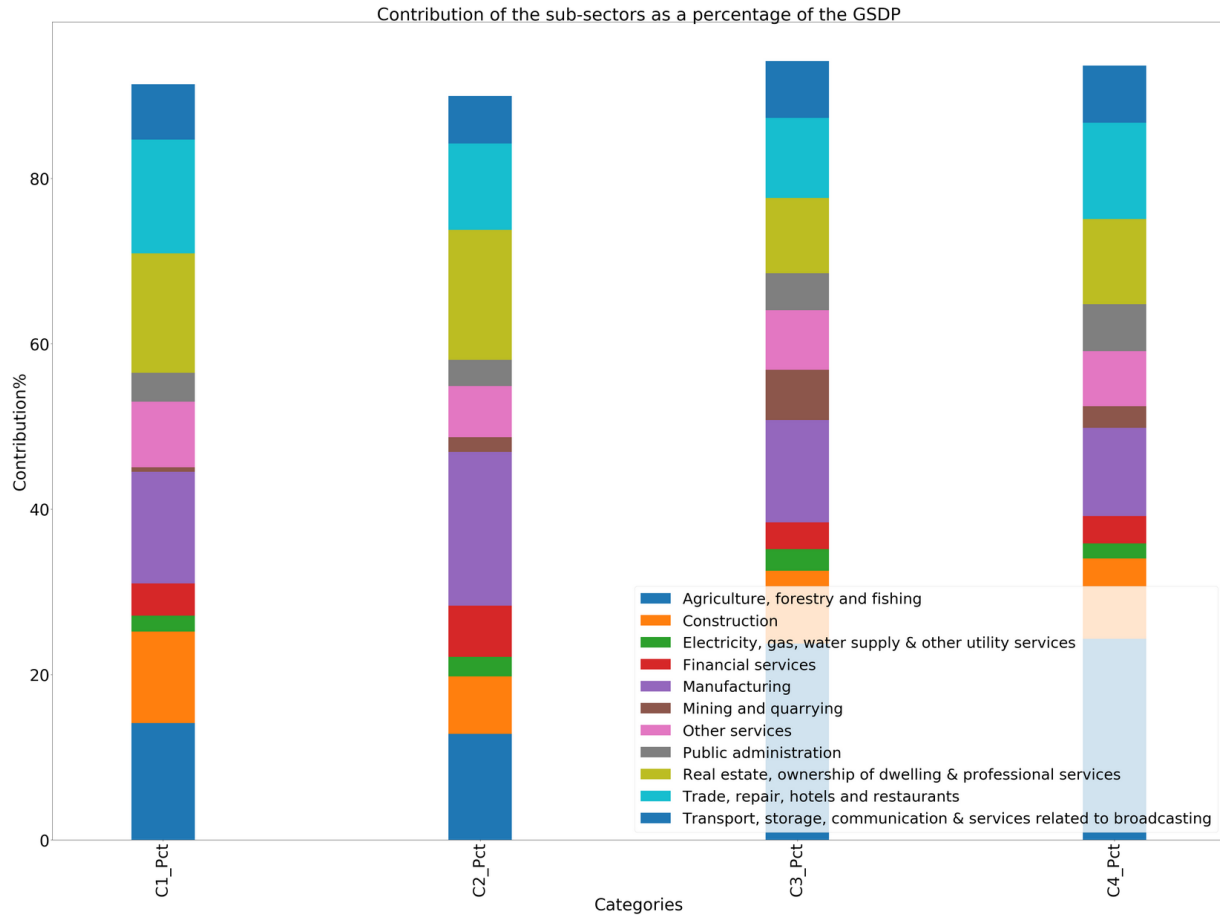
It is easily readable that on average tertiary sector has more contribution compared to others for all the states.

State Categorization and GSDP:

States are defined further into categories based on GDP per capita into C1, C2, C3, and C4 with quantile scale of 0.20, 0.50, 0.85, and 1.00. Here C1 shows the highest and C4 is lowest. The total aggregated GSDP (total GDP of states) for these categories showed below:

Category	C4	C3	C2	C1
Item				
Gross State Domestic Product	233252066.0	177966387.0	586380452.0	101930677.0

Contribution of the sub-sectors as a percentage of the GSDP



Insights and Recommendations:

1. C1 category states can more focus on Agriculture, forestry & fishing and it has good room to improve in manufacturing, Mining and quarrying. It should also focus in Electricity, gas, water supply & utility services.
2. C2 category has good percentage contribution from manufacturing. However, it can improve in Agriculture, Forestry & Fishing and construction.
3. C3 category has good percentage contribution from Agriculture, Forestry & Fishing. It should improve in Real estate and Financial services.
4. C4 category has good percentage contribution from Agriculture, Forestry & Fishing. It should improve in Manufacturing, Electricity, gas, water supply & utility services.

Part-II: GDP and Education Drop-out Rates

Data: Data II

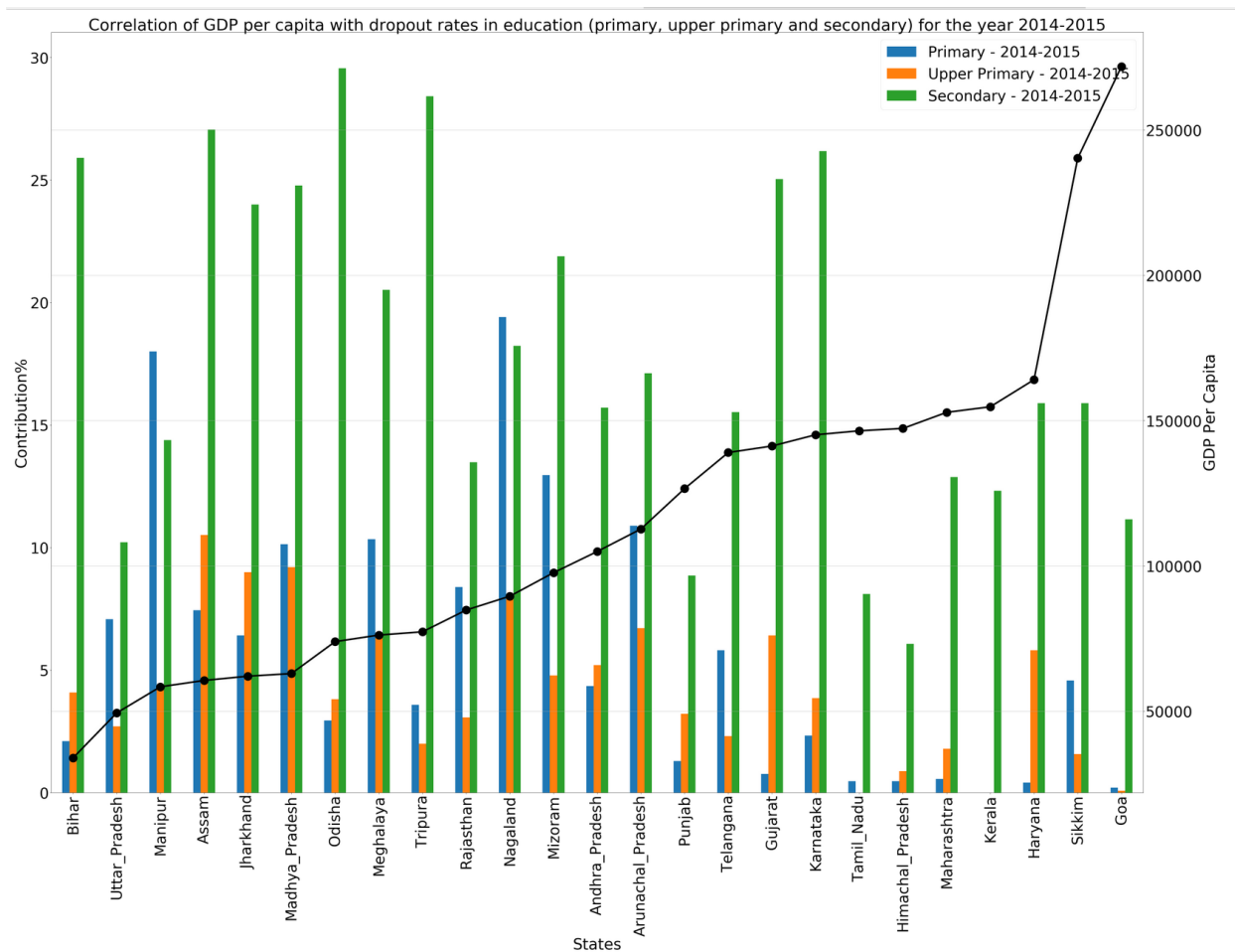
Data Cleaning Procedures followed:

1. Stripping the column names with trailing spaces and concatenation with underscore (_) wherever applicable.
2. Dropping the rows wherever applicable as mentioned in the problem statement.

Assumptions:

1. The analysis performed during period of 2014-15 on Primary, Upper Primary and Secondary dropouts.

Correlation of GDP per capita with dropout rates in education



Insights & Hypothesis:

1. It clearly shows that with the increase of GDP per capita, the dropout rates drastically falls and for lower

2. For lower GDP per capita states, the secondary dropouts are relatively high and for higher GDP per capita states, the primary and upper primary is comparatively low in compare to others.
3. Education has a strong inverse correlation with GDP per capita, and wherever the overall dropout rates are low, the GDP per capita increases.