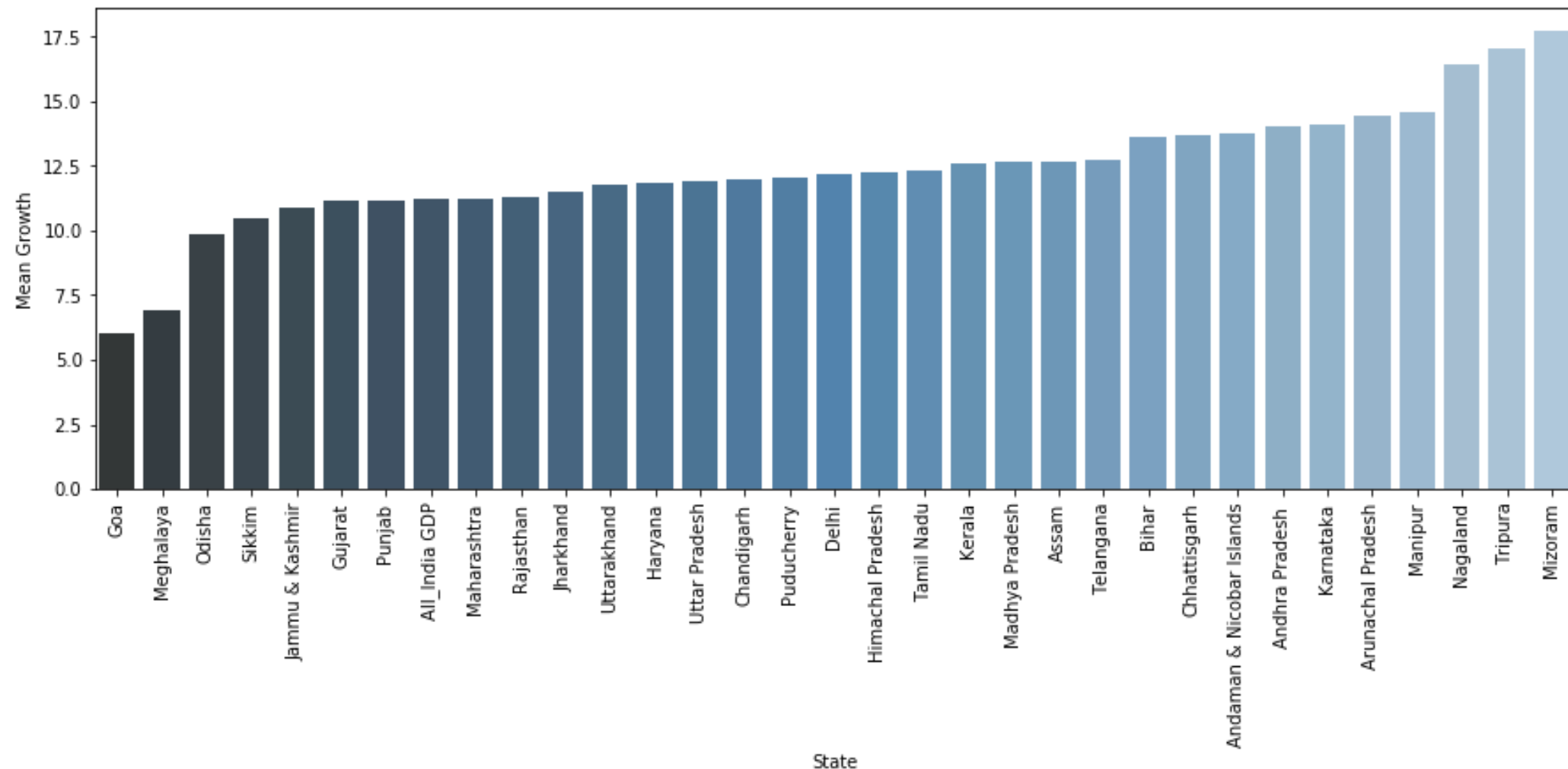


India's National GDP & School **Dropout Rate Analysis**

Manoj Patil

Average % GDP Growth for Indian States

(Over FY 2013-14, 2014-15 and 2015-16)



We can deduce from above bar plot if the states are performing well or struggling, depending on whether their average % GDP growth is above or below that of All India GDP

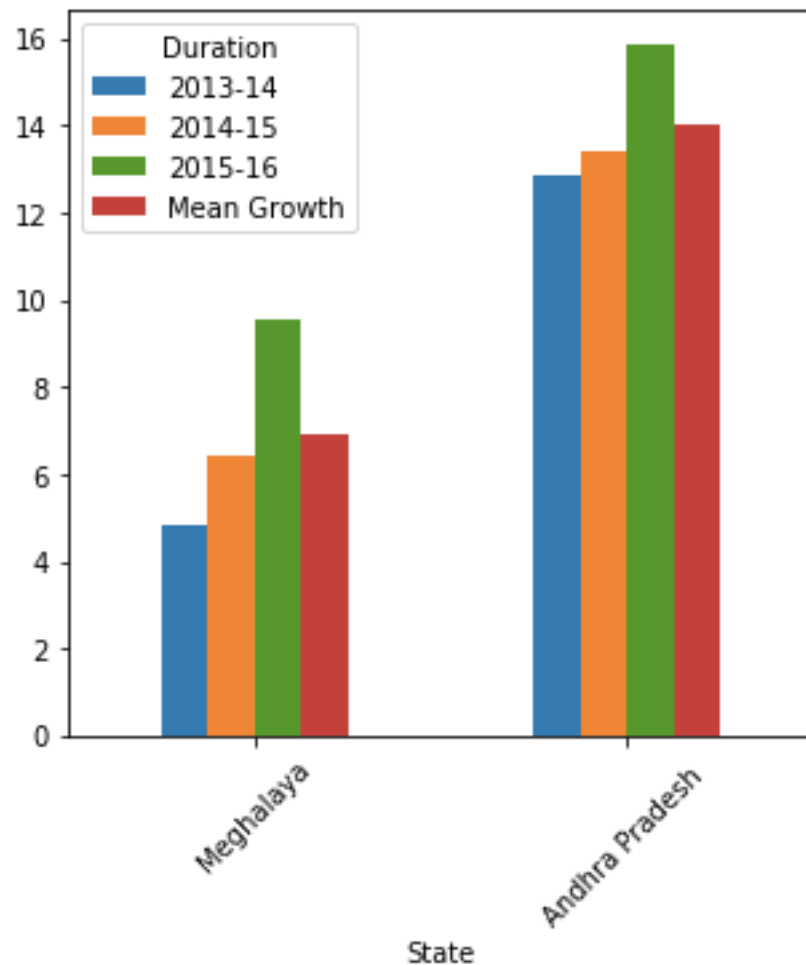
My home state, Maharashtra, which has Avg. % GDP Growth of 11.26% is slightly higher than that of All India GDP : 11.2%

Consistent Growth & Struggle over FY

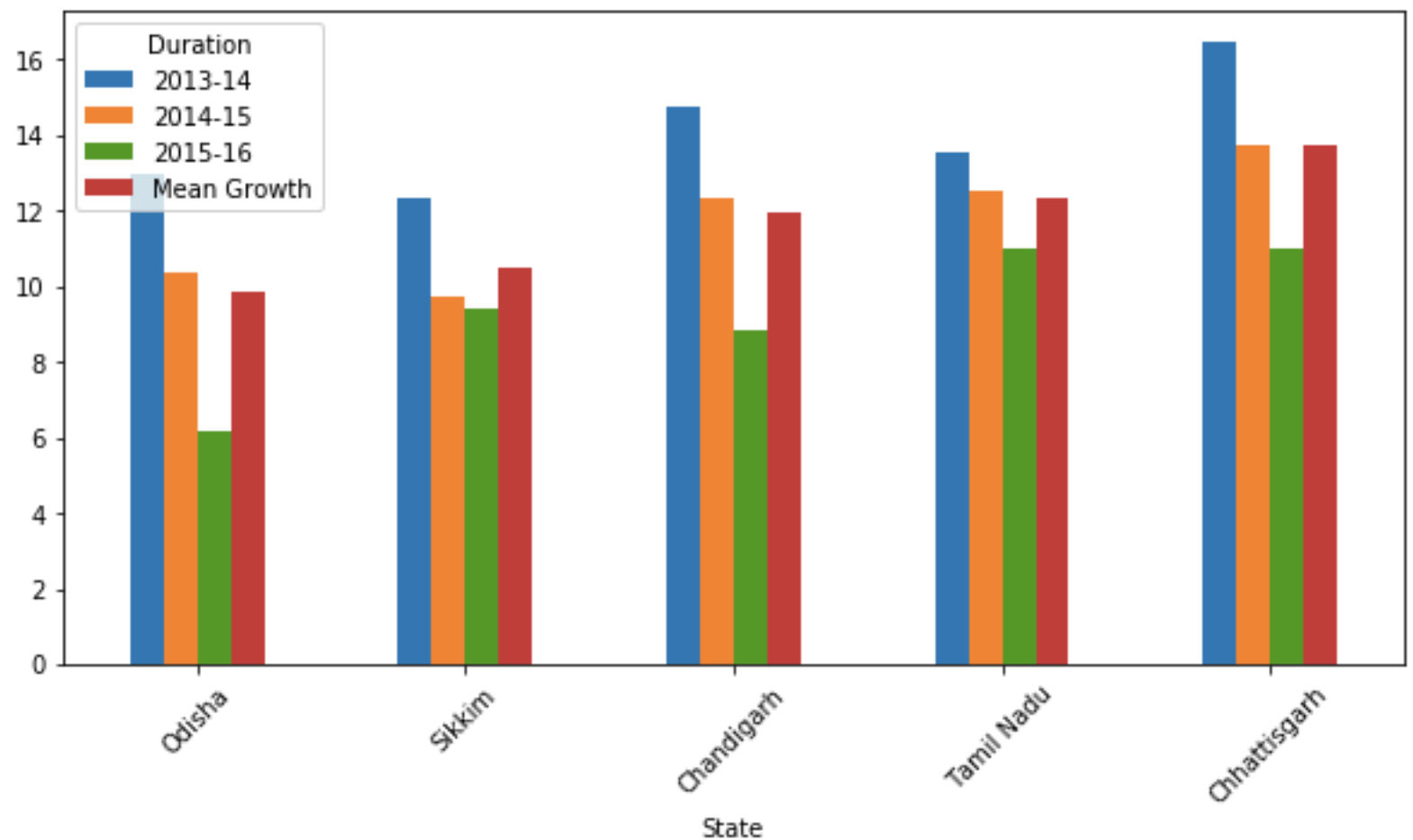
(Over FY 2013-14, 2014-15 and 2015-16)

This is observation about actual GDP growth over three FY which shows slightly different picture than previous slide which considered the avg. % growth

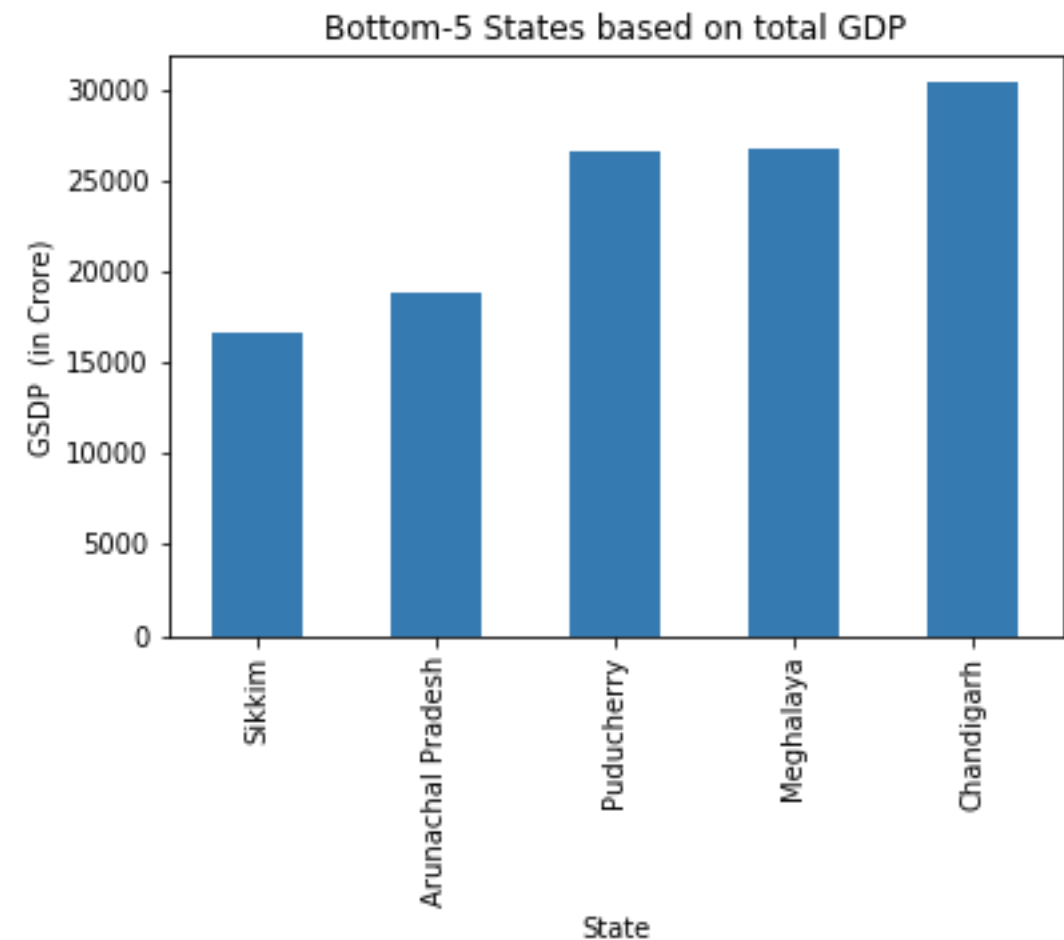
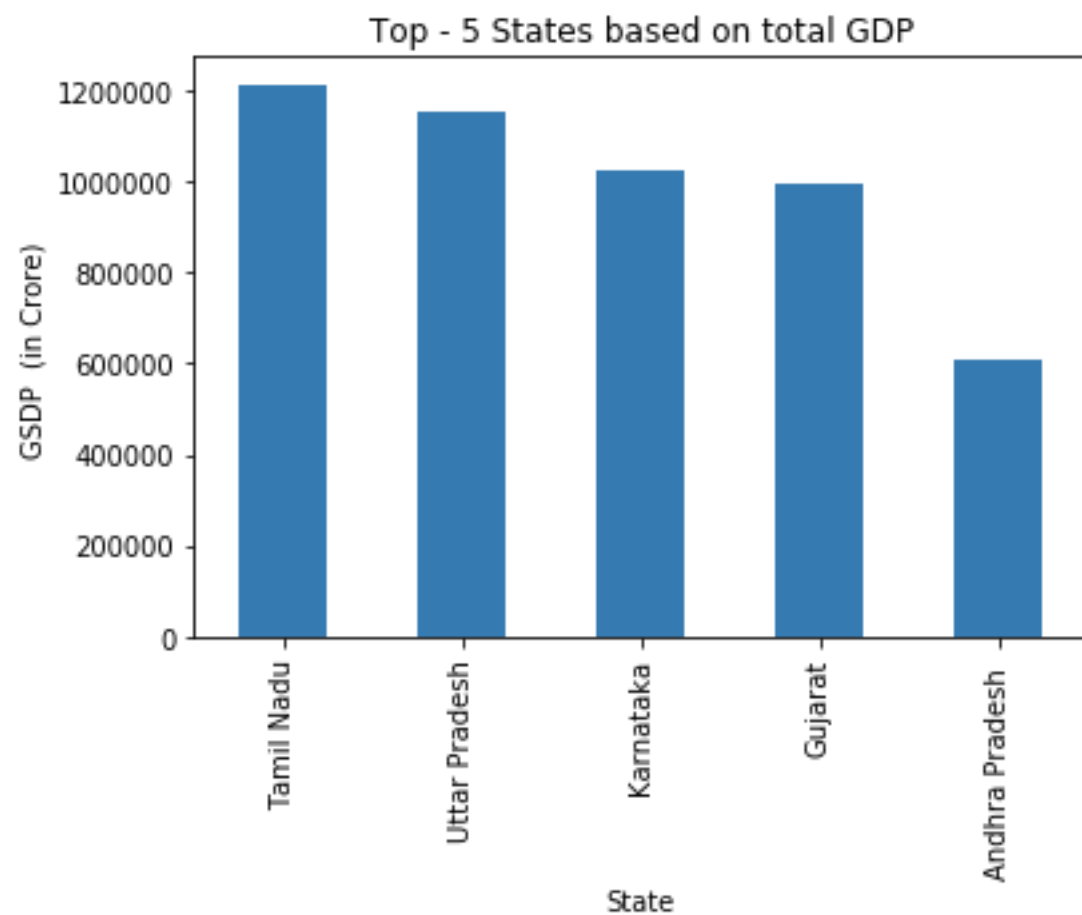
Only 2 states have their % GDP growth is increasing over three years
'2013-14' < '2014-15' < '2015-16'



Top 5 states have their % GDP growth is slowing down over three years
'2013-14' > '2014-15' > '2015-16'



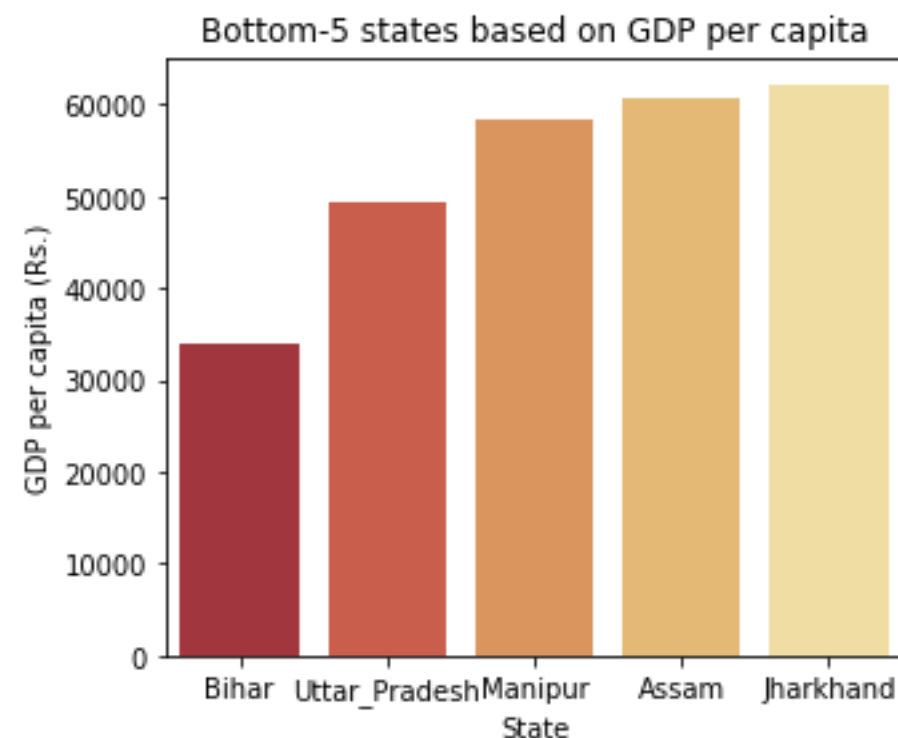
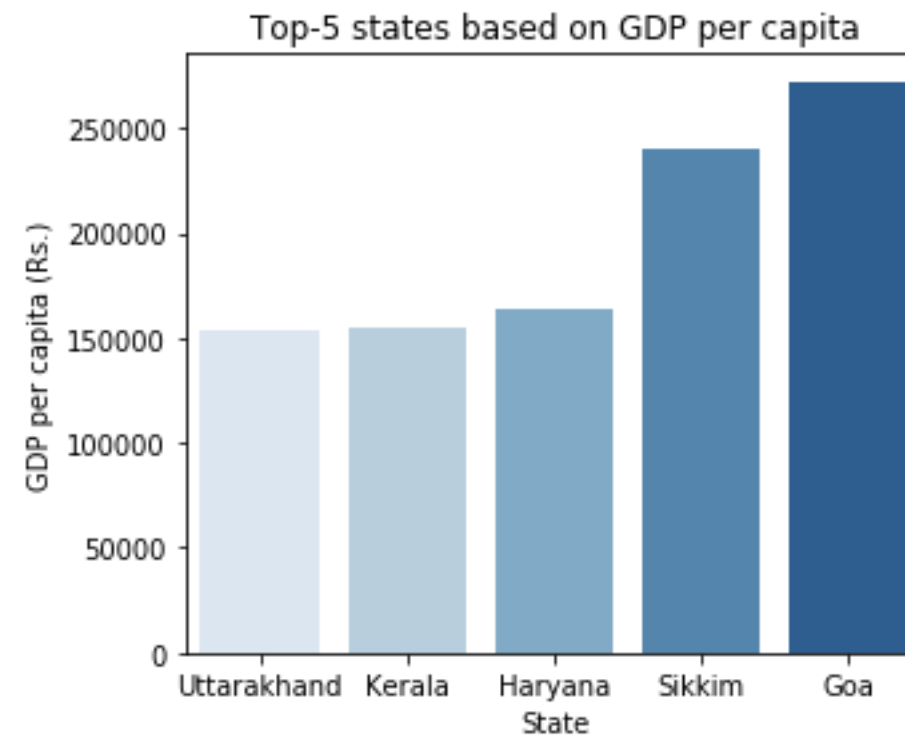
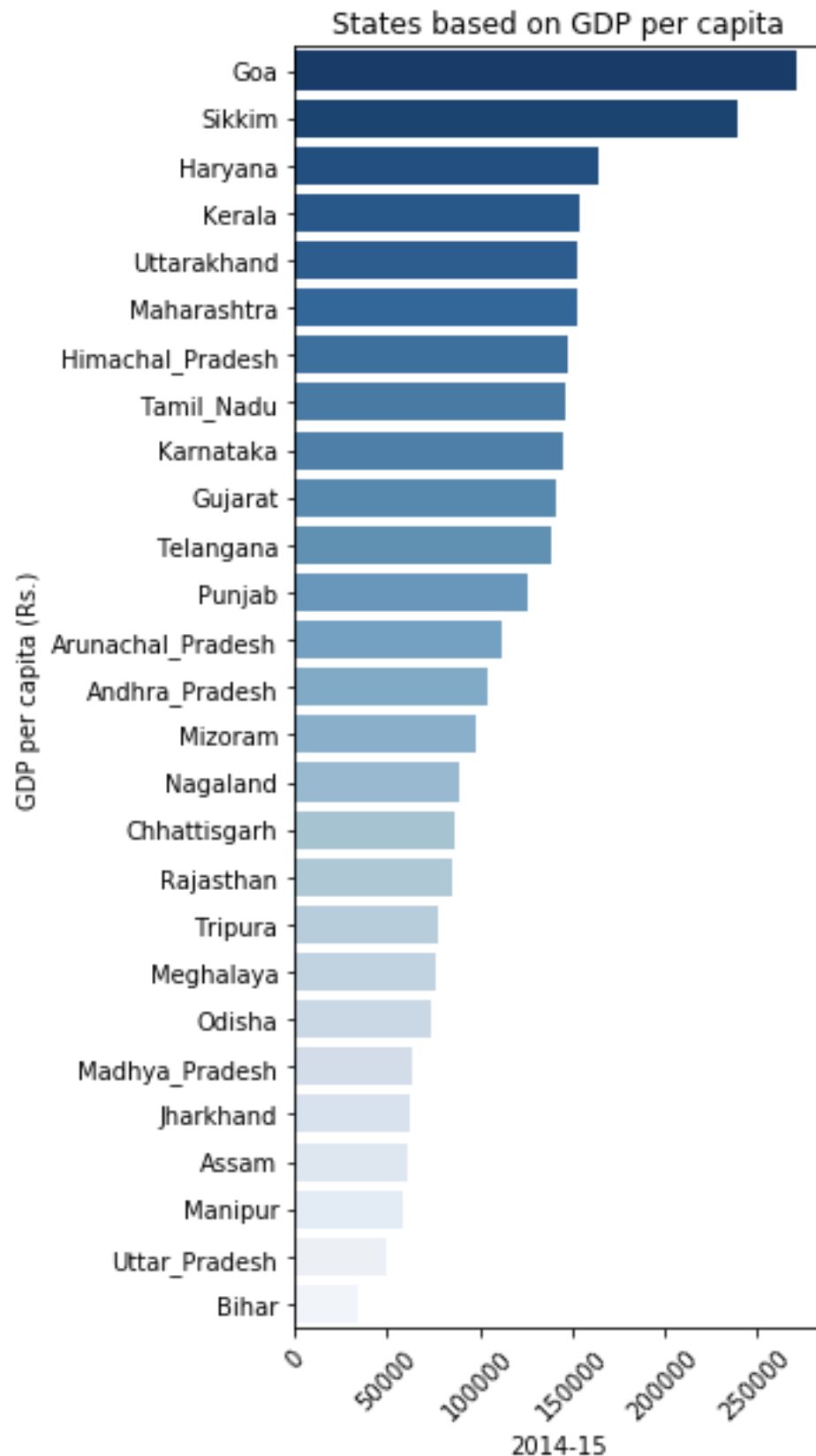
GDP Analysis for FY 2015-16



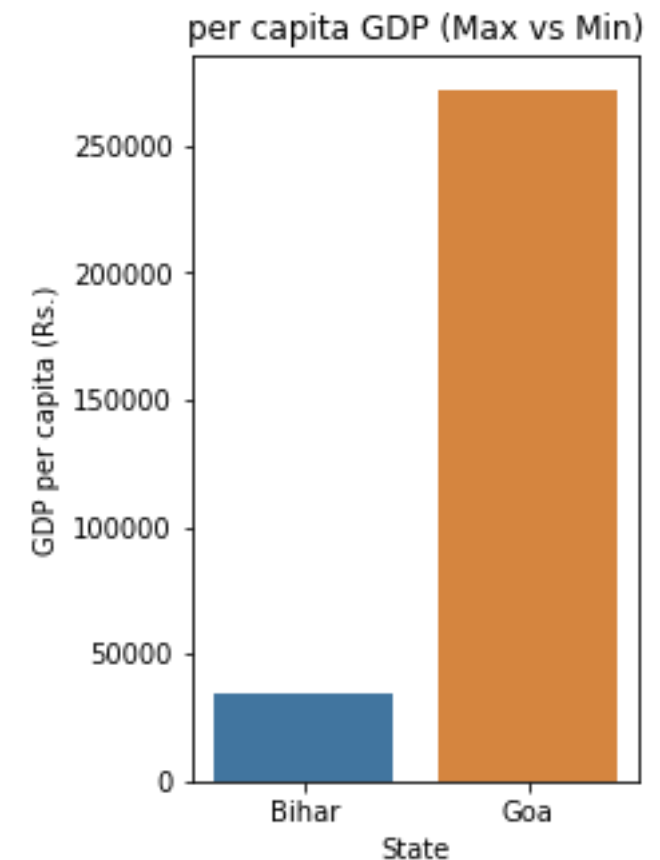
Based on Total GDP of the states for FY 2015-16

***10 states have missing data for FY2015-16**

GDP Per Capita Analysis for FY 2014-15

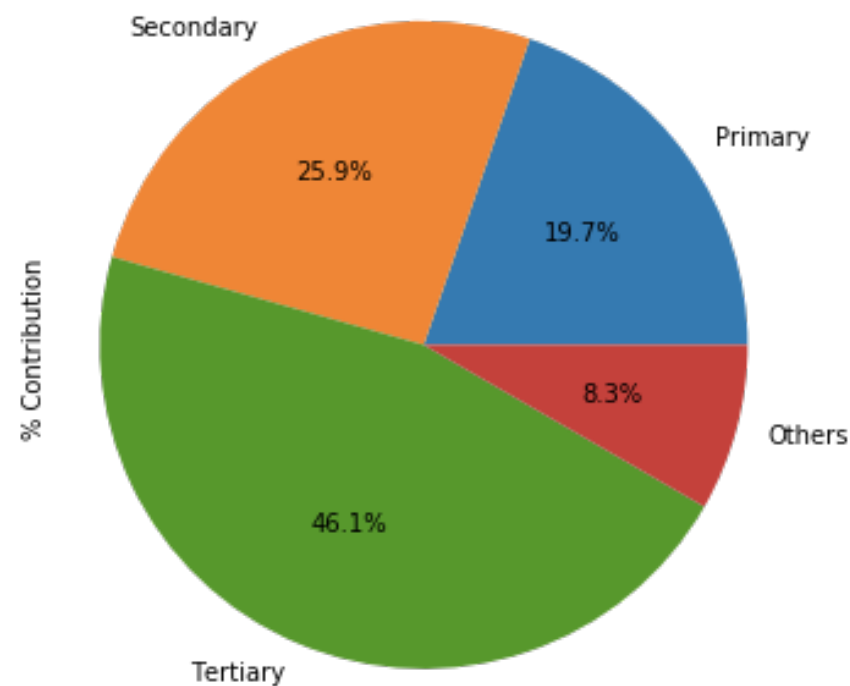


- State with highest per capita GDP :- **Goa (Rs. 271793.0)**
- State with highest per capita GDP :- **Bihar (Rs. 33954.0)**
- The ratio of Maximum and Minimum Per Capita GDP as below: **8.0**

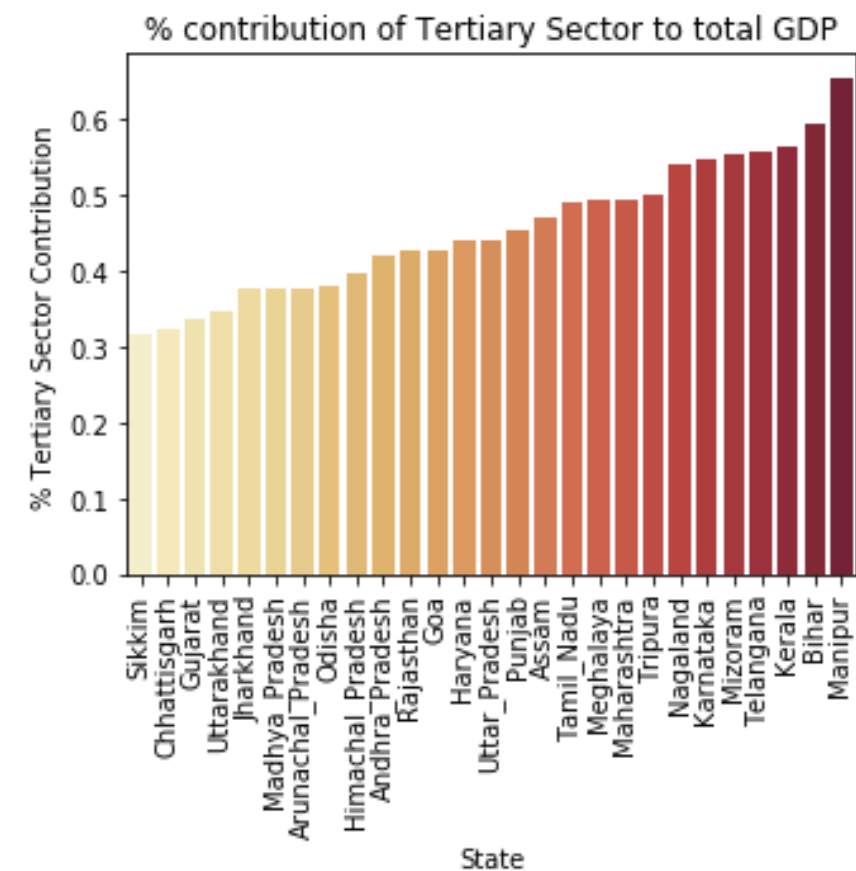
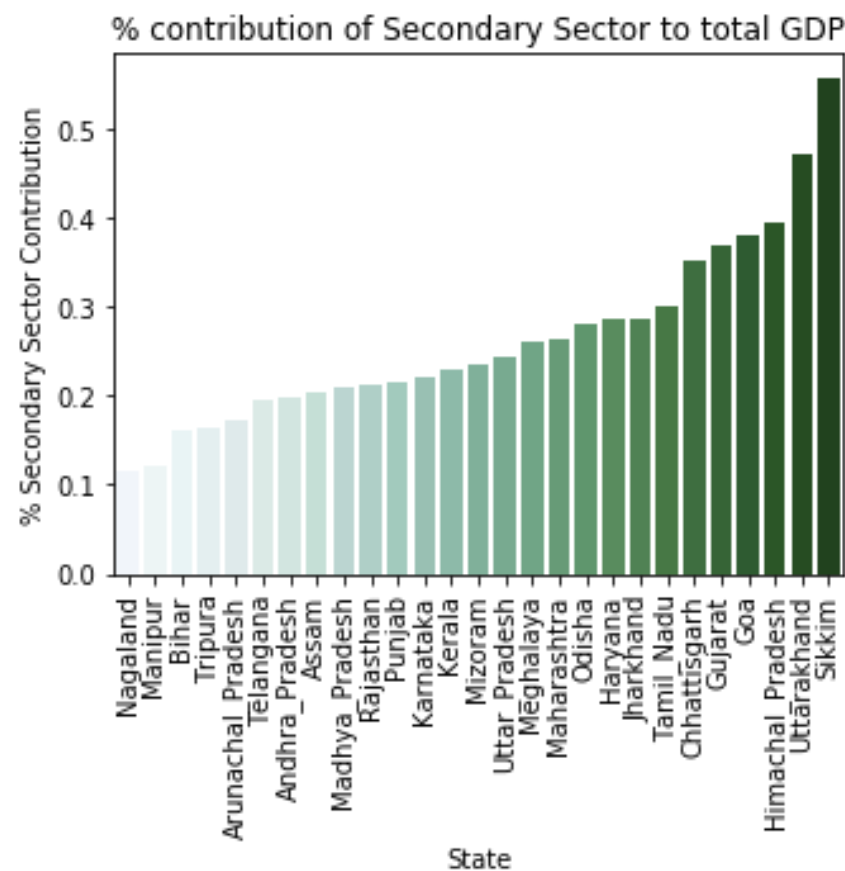
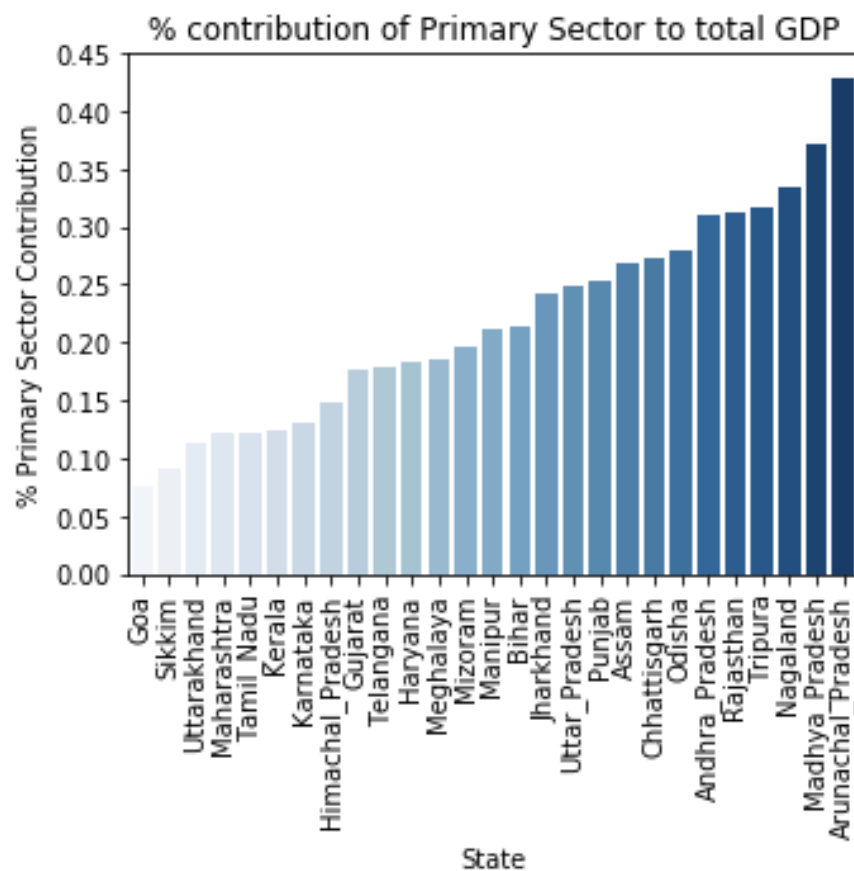


Contribution of Primary, Secondary and Tertiary Sectors for FY 2014-15

% contribution of Primary/Secondary/Tertiary Sectors to India's GDP FY 2014/15



Sector	Sub-sector
Primary	Agriculture, forestry and fishing
	Mining and quarrying
Secondary	Manufacturing
	Electricity, gas, water supply & other utility...
	Construction
Tertiary	Trade, repair, hotels and restaurants
	Transport, storage, communication & services r...
	Financial services
	Real estate, ownership of dwelling & professio...
	Public administration
	Other services



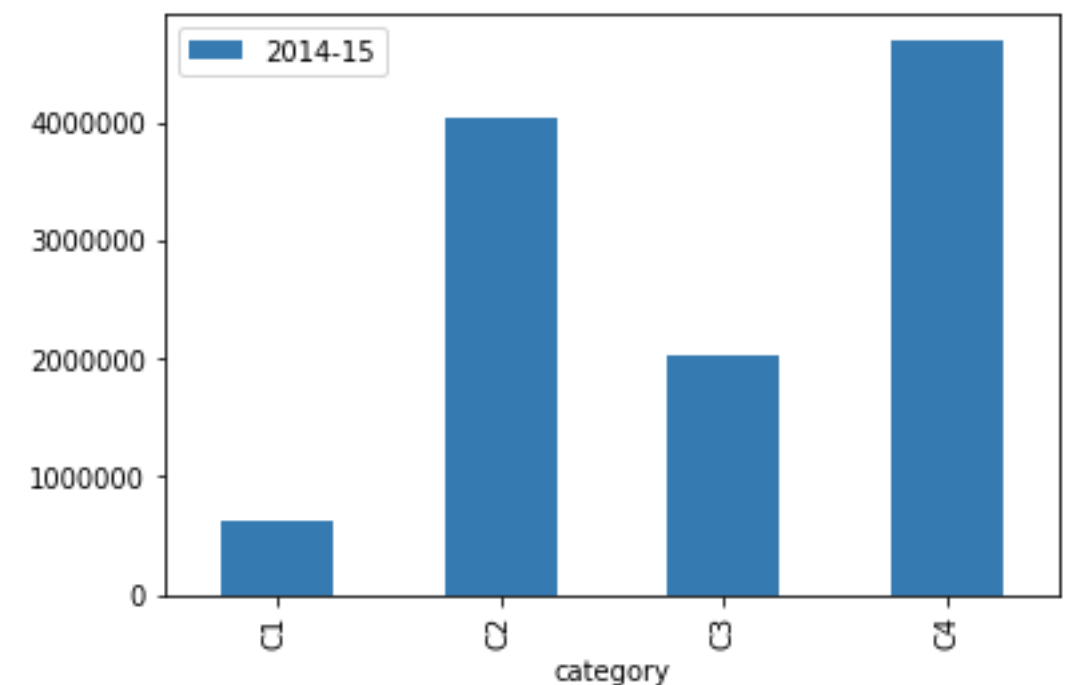
Categorisation of States Based on Per Capita GDP

Categorisation is done based on the GDP per capita
Based on quantile values: 0.20,0.5, 0.85, 1

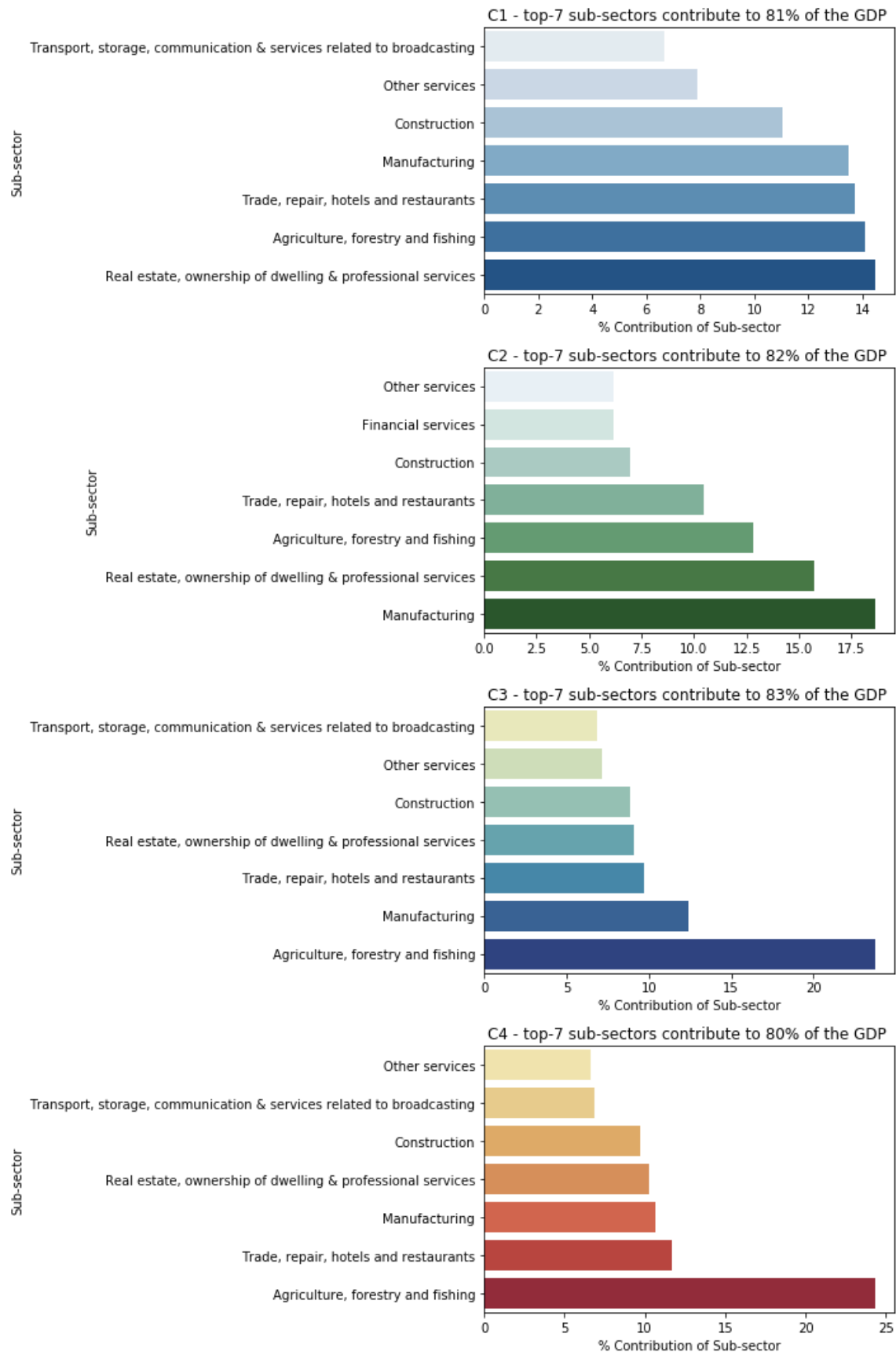
- C1 : Between 1 and 0.85
- C2 : Between 0.85 and 0.5
- C3 : Between 0.5 and 0.20
- C4: Equal to or Less than 0.20

C1	C2	C3`	C4
Sikkim	Maharashtra	Tripura	Jharkhand
Goa	Telangana	Rajasthan	Manipur
Kerala	Tamil_Nadu	Chhattisgarh	Bihar
Haryana	Punjab	Nagaland	Assam
	Karnataka	Odisha	Uttar_Pradesh
	Uttarakhand	Meghalaya	Madhya_Pradesh
	Himachal_Pradesh	Mizoram	
	Gujarat	Andhra_Pradesh	
	Arunachal_Pradesh		

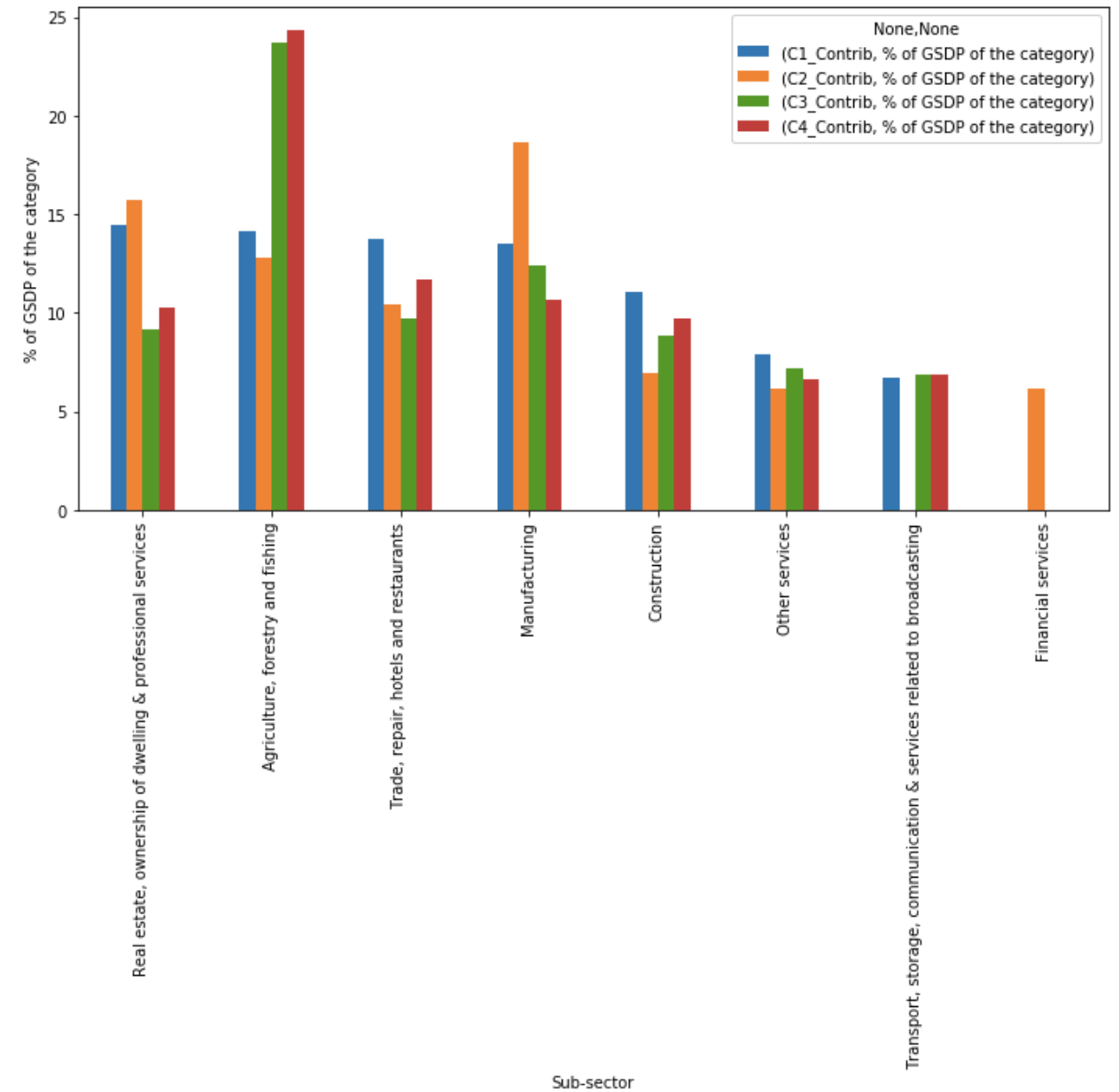
State Categories and Their Population



Major Contributor Sub-sectors to GDP for FY 2014-15



Comparison of % contribution by the sub-sectors for each Category



Recommendations for Per Capita GDP Growth

For C1 Category:

- C1 states should focus on 'Manufacturing' sector as it can help them to improve the per capita GDP.
- Focus on "Financial services" should help C1 category to raise the per capita GDP
- As C1 states are states with lowest population, they should focus on less human resource intensive sub-sectors

For C2 Category:

- "Transport, storage, communication & services related to broadcasting" which is major contributor for other categories can help this sector
- "Construction" sub-sector can be also tapped by this category
- "Trade, repair, hotels and restaurants" is another sector which can help this category

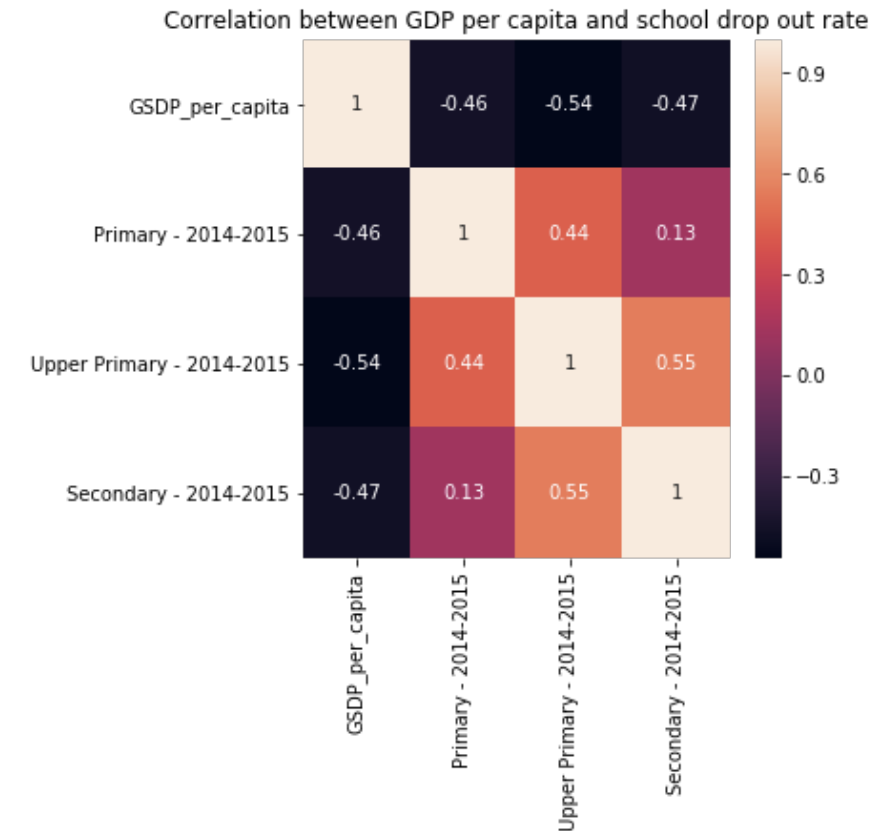
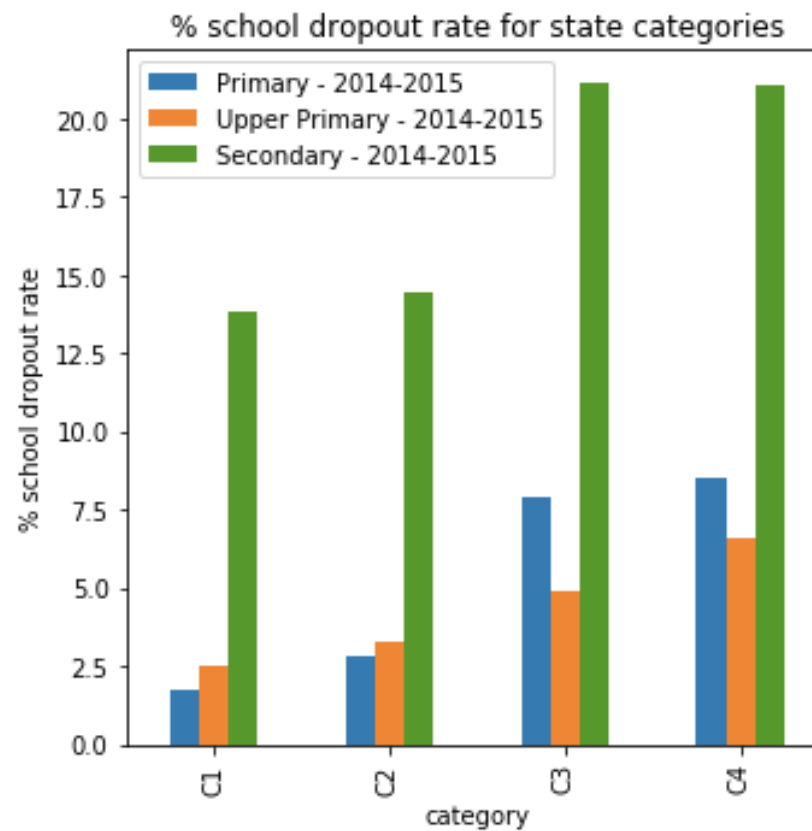
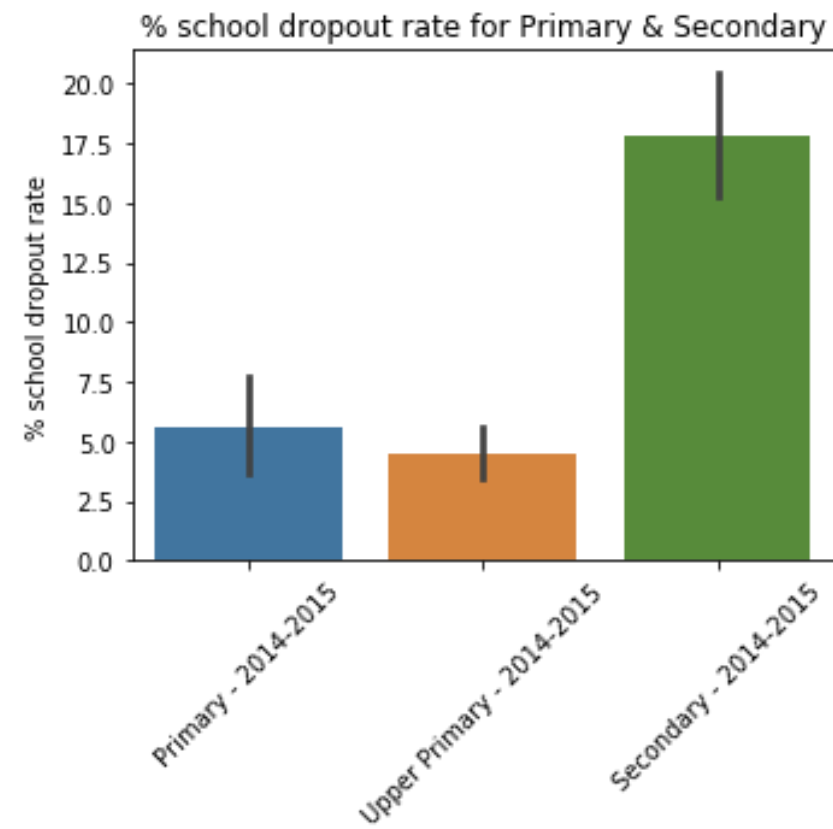
For C3 Category:

- The contribution of "Real estate, ownership of dwelling & professional services" sector is almost same for both C1 and C3 states even though the population of C1 states is almost one third of that of C3 states.
- Manufacturing is a sub-sector where C3 states are lagging and they should focus on that.
- "Financial services" should be also be targeted by these states

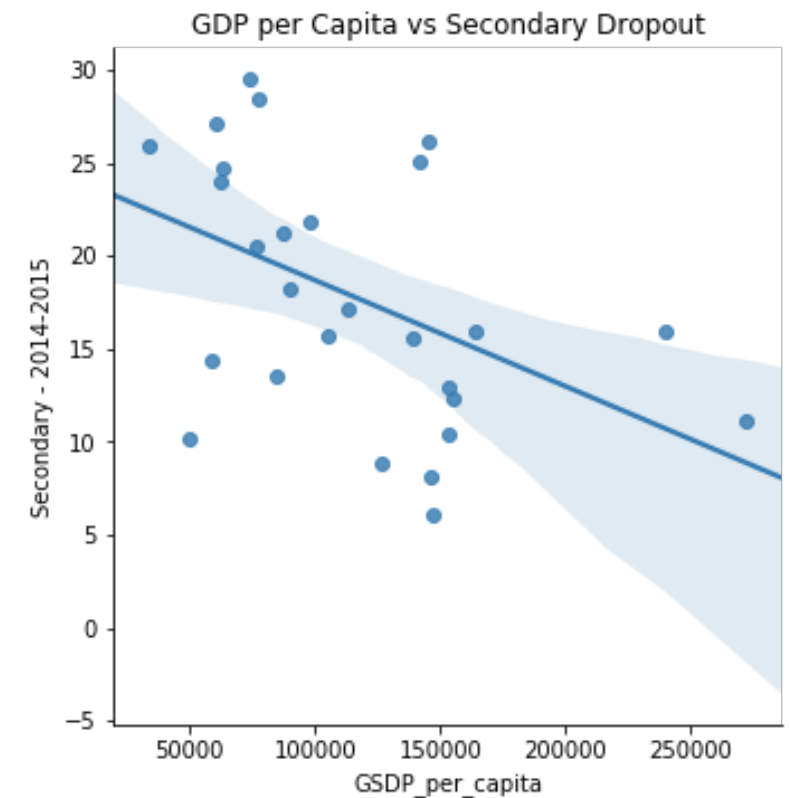
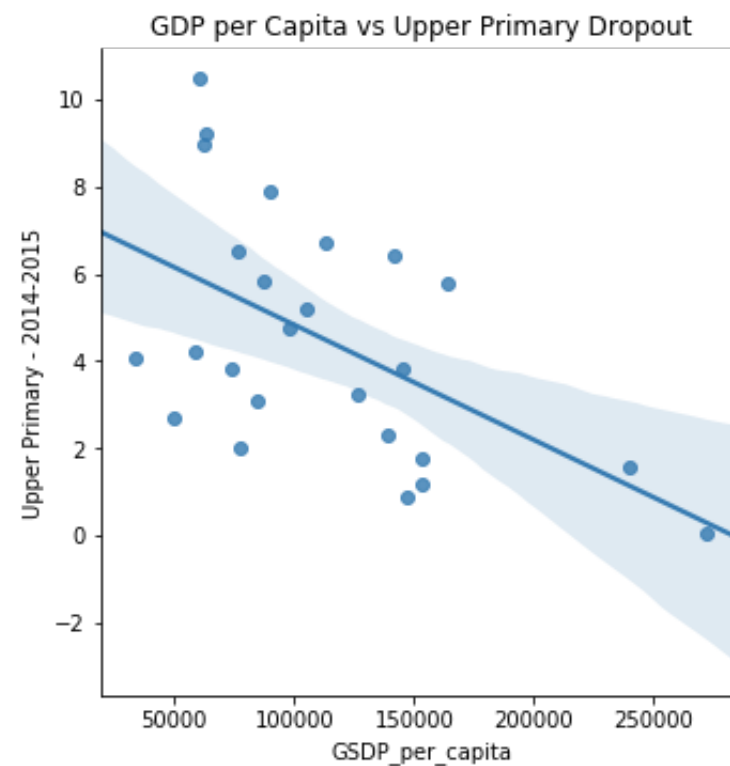
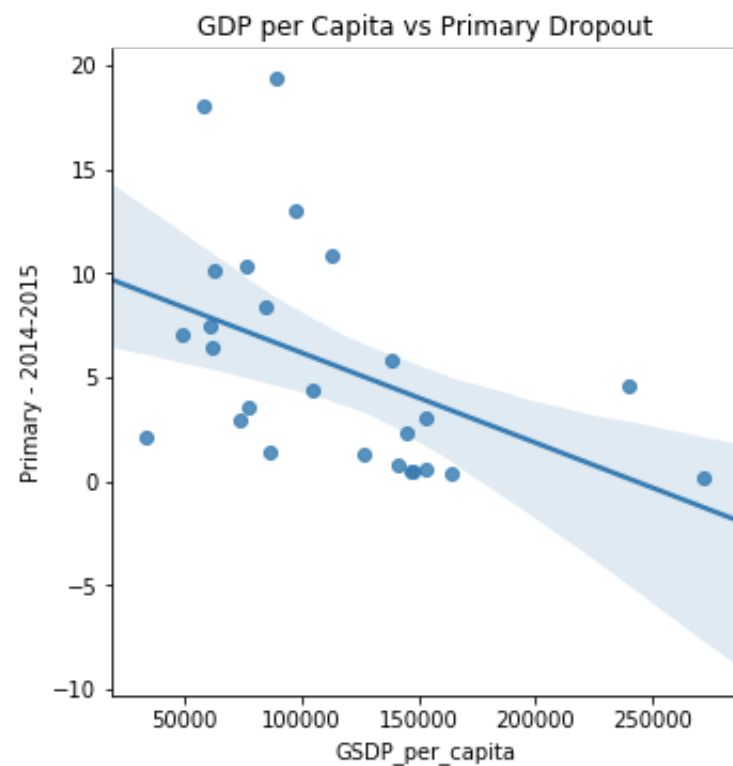
For C4 Category:

- "Financial services" sub-sector is untapped by this category
- "Real estate, ownership of dwelling & professional services" sub-sector also needs some attention
- Increased focus on "Manufacturing" can benefit this category to increase the per capita GDP

School Dropout % Rate for FY 2014-15



School Dropout Rate % vs Per Capita GDP



Observations about School Dropout Rate

Observations:

A. It seems that at below schooling levels

- Primary
- Upper Primary
- Secondary

as the GDP per capita increased the drop-out rates decrease.

B. The Primary, Upper Primary and Secondary dropout rate negatively correlated to the GDP per capita growth with correlation coefficient of -0.46, -0.54 & -0.47 respectively

C. Correlation between Primary and Secondary dropout rate is quite weak at 0.13

D. Across all categories, the school dropout rate for Secondary is quite high, at avg. of 17.8% compare to the primary and Upper Primary which is at avg. of 5.6% and 4.5% respectively

E. For C3/C4 states the dropout at Upper Primary level is lower than the primary level

Hypothesis 1:

An observation about the low GDP states, which have early dropout at primary/secondary education level. This can be associated to the fact that these states have low per capita income and major dependency on the "Agriculture, forestry and fishing" sub-sector

- C3 - Agriculture, forestry and fishing 23.73%
- C4 - Agriculture, forestry and fishing 24.32%

So possible cause might be lack of family support for primary/secondary education and need to earn basic living at much younger age. This might also explain the reason that we have around 20% dropout at secondary school level in C3/C4 states.

Hypothesis 2:

It is observed that states with Highest Per Capita GDP have maximum drop-out rates at Secondary level.

Below are the highest contributor Sub-sectors to the GDP of the C1 states:

- Real estate, ownership of dwelling & professional services 14.46 %
- Agriculture, forestry and fishing 14.12 %
- Trade, repair, hotels and restaurants 13.73 %

So we might able to link the dropout at higher secondary level to the fact that the above sub-sectors are major contributor to these states which allows the students to earn at early level without need of higher education

Thank You !