

ANALYSIS ON GROSS DOMESTIC
PRODUCT AND DROP OUT RATES

NITI-
AAYOG

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BASE YEAR [2015-16]

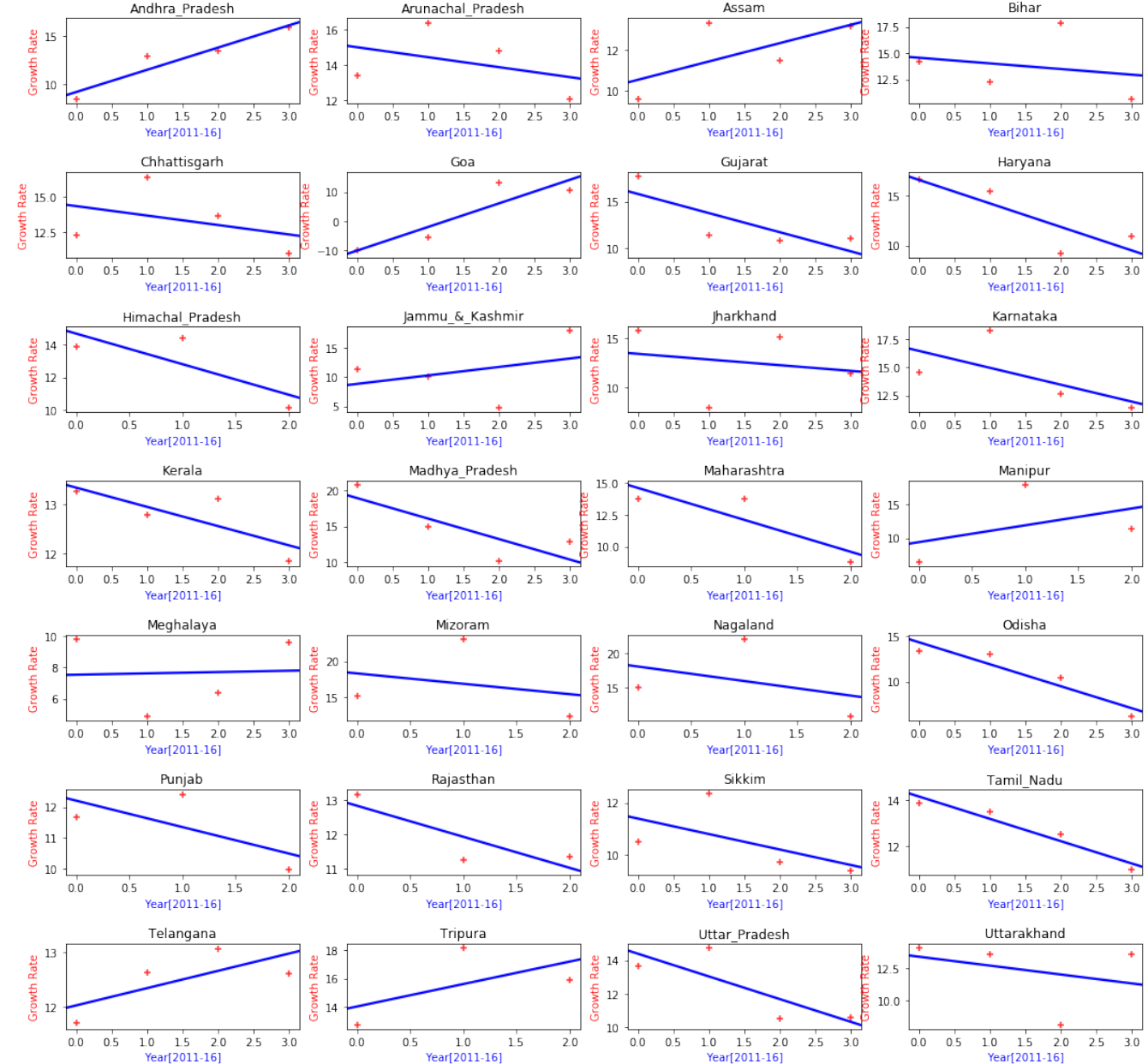
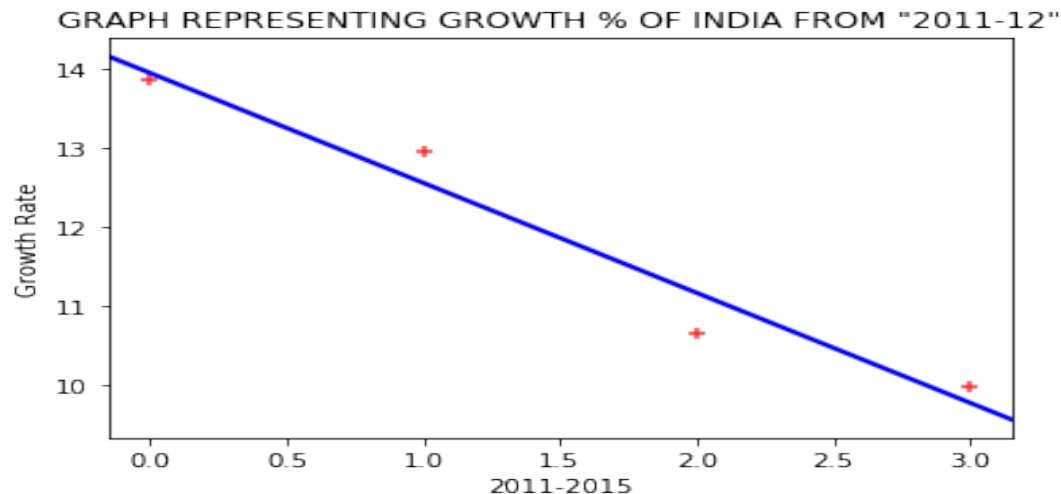
DATA USED

- GDP for the years 2011-16 (i.e Data for 2016-17 not used)
 - GSDP for all states and union territories
 - Sectorial Classification of GSDP for all states
 - Student dropout rate
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- SOURCE : <https://data.gov.in/>

Note: This analysis is made on the assumption that Jammu and Kashmir is one of the State

Part 1A: Growth Rates

- ❖ Goa, the state with highest Per capita Gdp and posts a huge jump from -10.02 in 2012 to 10.75 in 2016
- ❖ Growth rates for most of the states fell down from 2012 to 2016
- ❖ Unfortunately, the growth rates of the states which have most of the metropolitan cities like Karnataka, Maharashtra, Tamil Nadu fell down
- ❖ Growth Rate of All India GDP also fell down from 13.86 to 9.99



Part 1A: Comparison of Slopes of Growth Rates and Plotting of Total Gsdp for all states

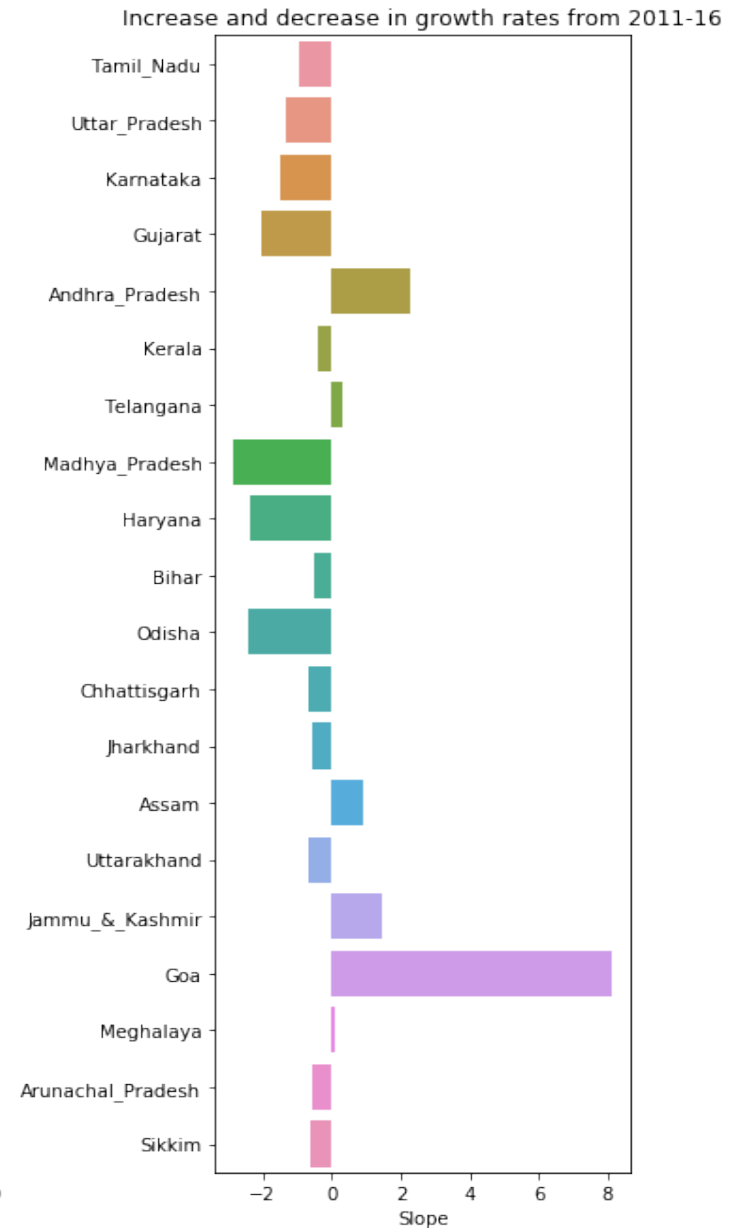
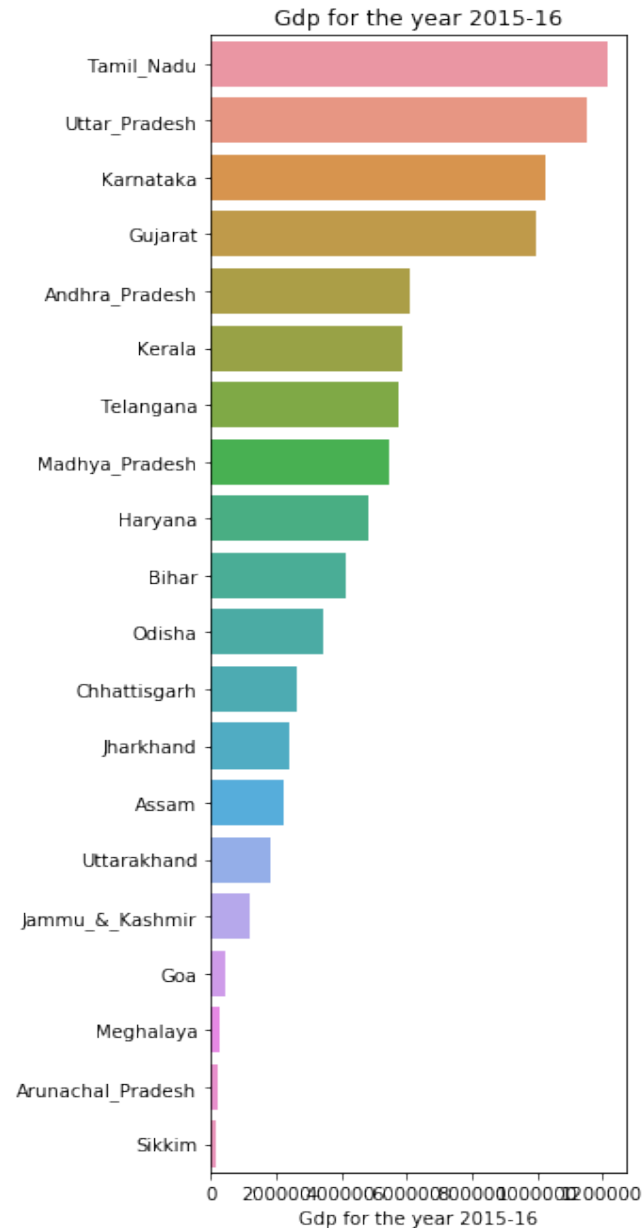
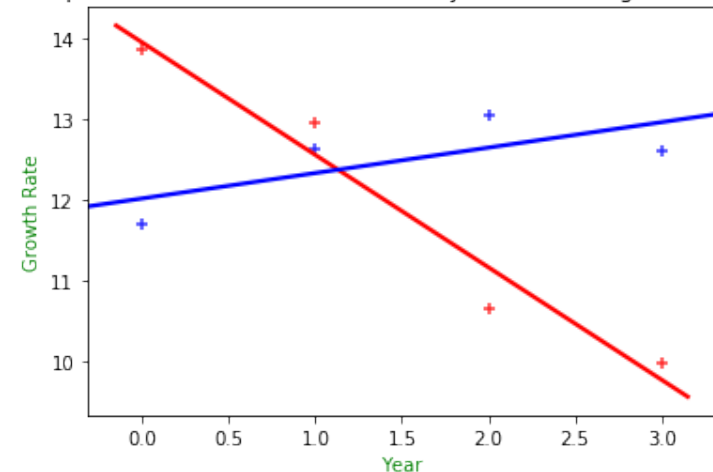
TOP 5 STATES BASED ON GDP

Gdp for the year 2015-16	
Tamil_Nadu	1212668.0
Uttar_Pradesh	1153795.0
Karnataka	1027068.0
Gujarat	994316.0
Andhra_Pradesh	609934.0

BOTTOM 5 STATES BASED ON GDP

Gdp for the year 2015-16	
Sikkim	16637.0
Arunachal_Pradesh	18784.0
Meghalaya	26745.0
Goa	45002.0
Jammu_&_Kashmir	118387.0

Comparison of Growth Rates over the years for Telangana and India



Part 1-B – GDP PER CAPITA

TOP 5 STATES BASED ON GDP PER CAPITA

Per Capita GSDP (Rs.)	
State	
Goa	271793
Sikkim	240274
Haryana	164077
Kerala	154778
Uttarakhand	153076

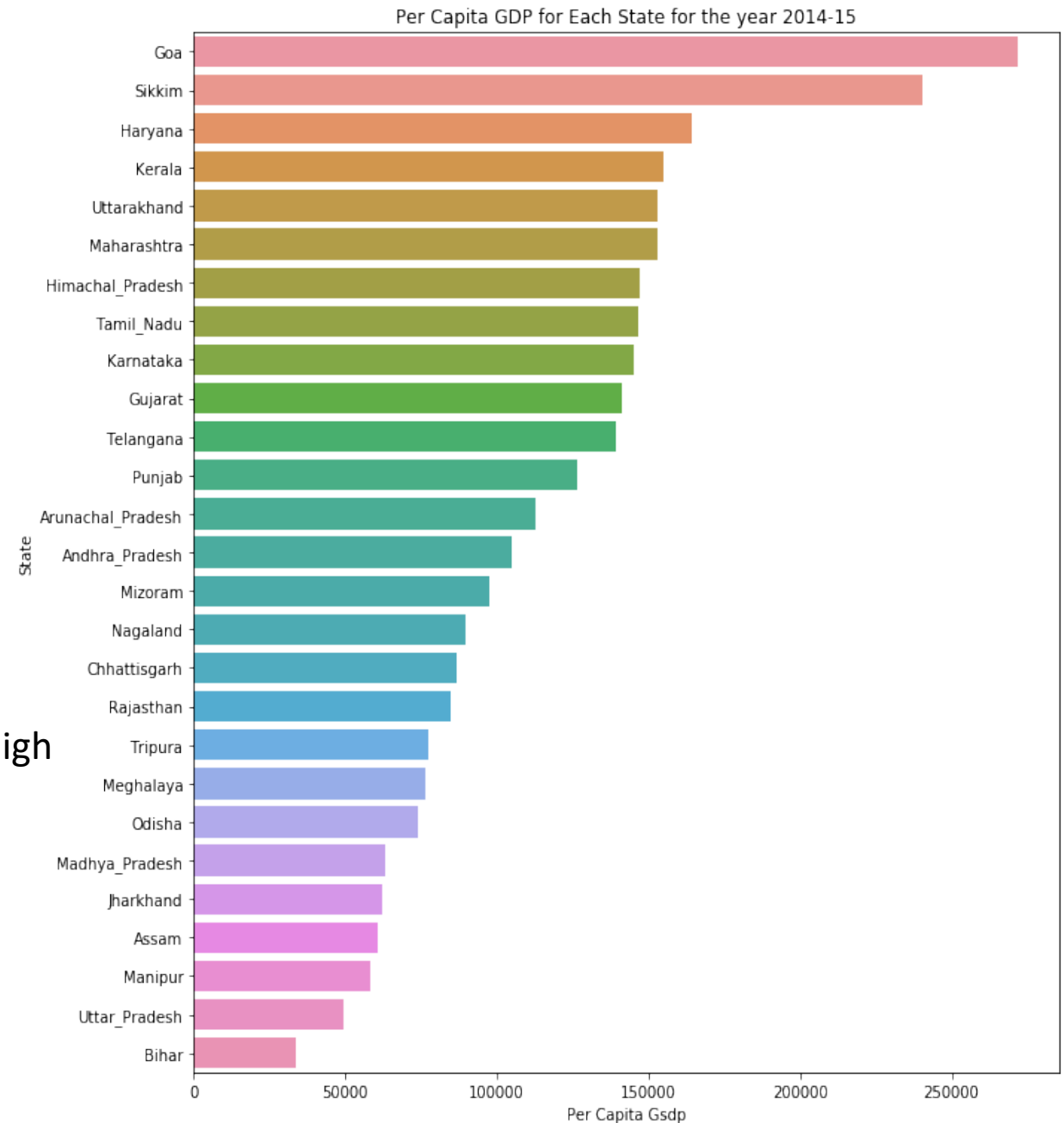
The increase in growth rate of Gsdp of Goa is evident here. Goa is the state with highest Per-capita GDP

* Reasons could be that Goa and Sikkim attracts Tourism

BOTTOM 5 STATES BASED ON GDP PER CAPITA

Per Capita GSDP (Rs.)	
State	
Bihar	33954
Uttar_Pradesh	49450
Manipur	58442
Assam	60621
Jharkhand	62091

* Kerala being the state with high Literacy rate it is ranked high In terms of per capita Gsdp

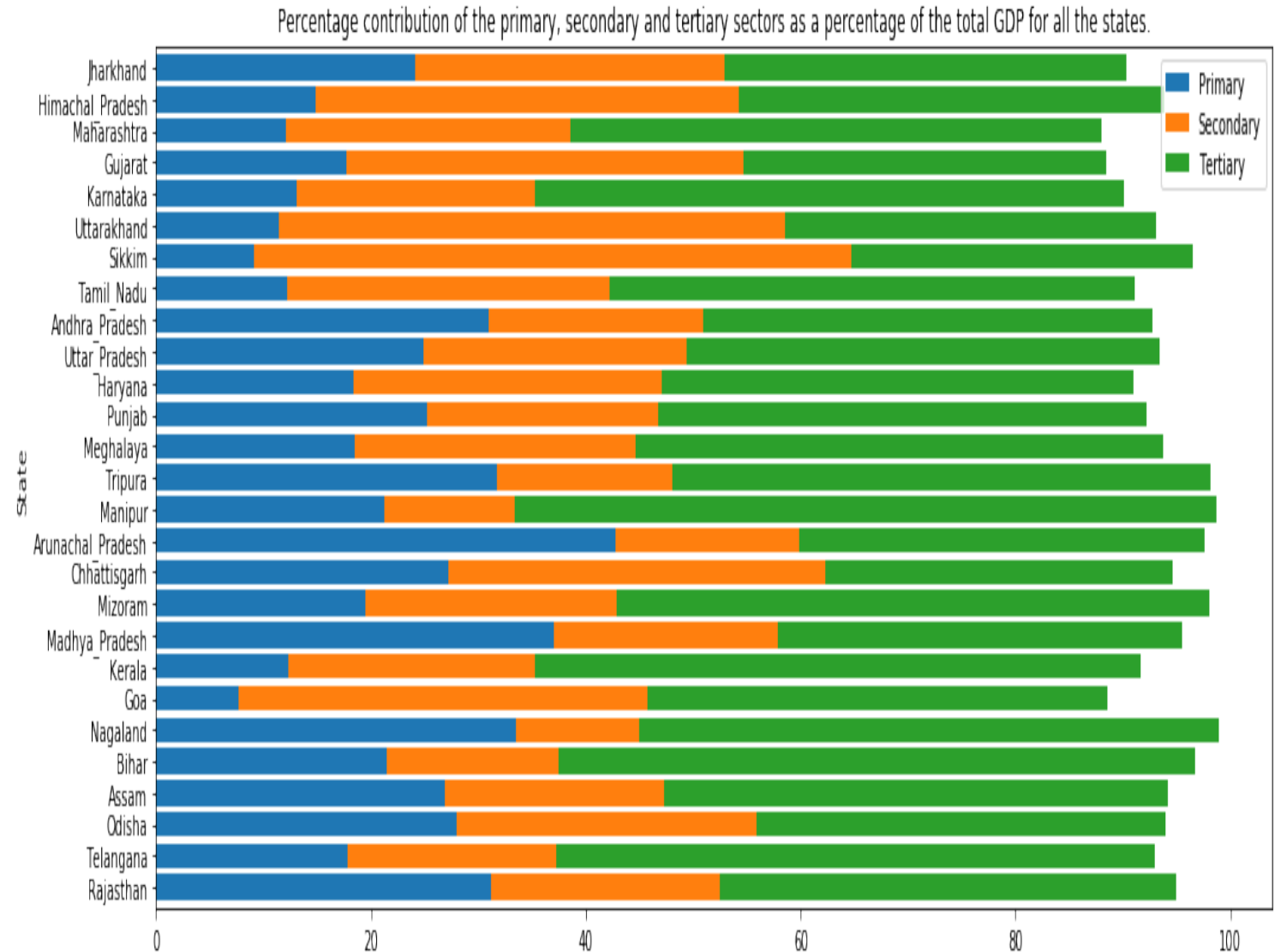


Part 1-B –Sectorial Contribution to the Gdp

- FOR MOST OF THE STATES THE MAJOR PROPORTION OF THE GDP IS CONTRIBUTED BY THE TERTIARY SECTOR
- ARUNACHAL PRADESH,MADHYA PRADESH,ANDHRA PRADESH ARE PRIMARY SECTOR DOMINENT
- **We can observe that there is higher positive corelation between states with lower per Capita Gsdp and their % contribution of Primary sector to total GDP**

Correlation of percentile of the state (below first quartile) and %contribution of Primary sector to total GDP

0.6703506224418162

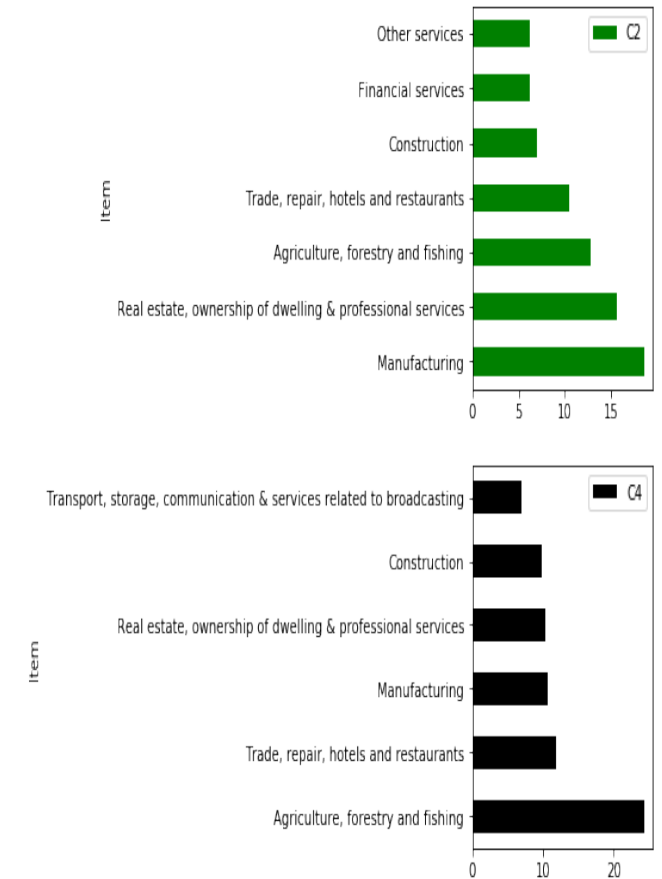
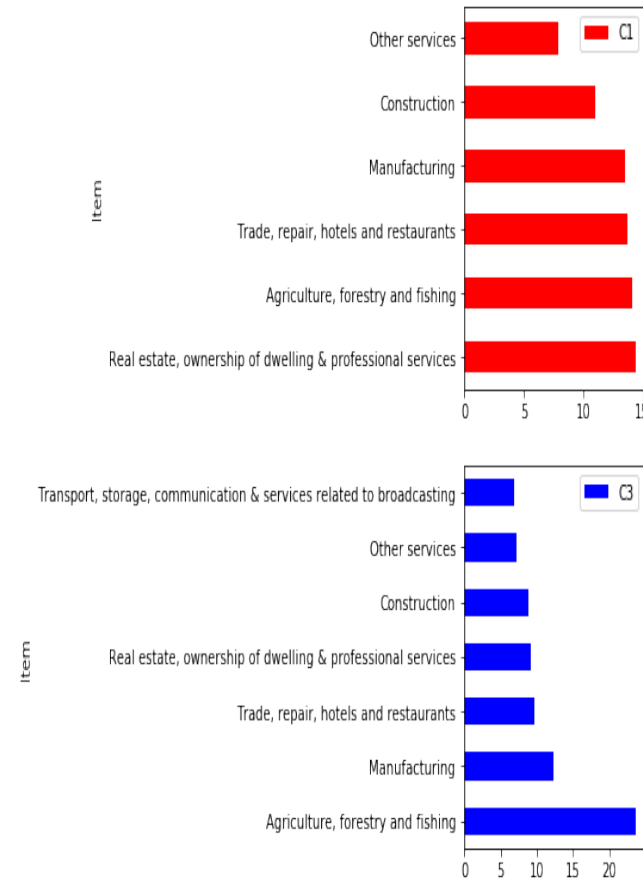


Part 1-B –Categorizing the states in 4 parts (C1,C2,C3,C4) where C1 has the highest per-capita GDP and C4 has the lowest

% Contribution of subsectors of Total GSDP for each Category

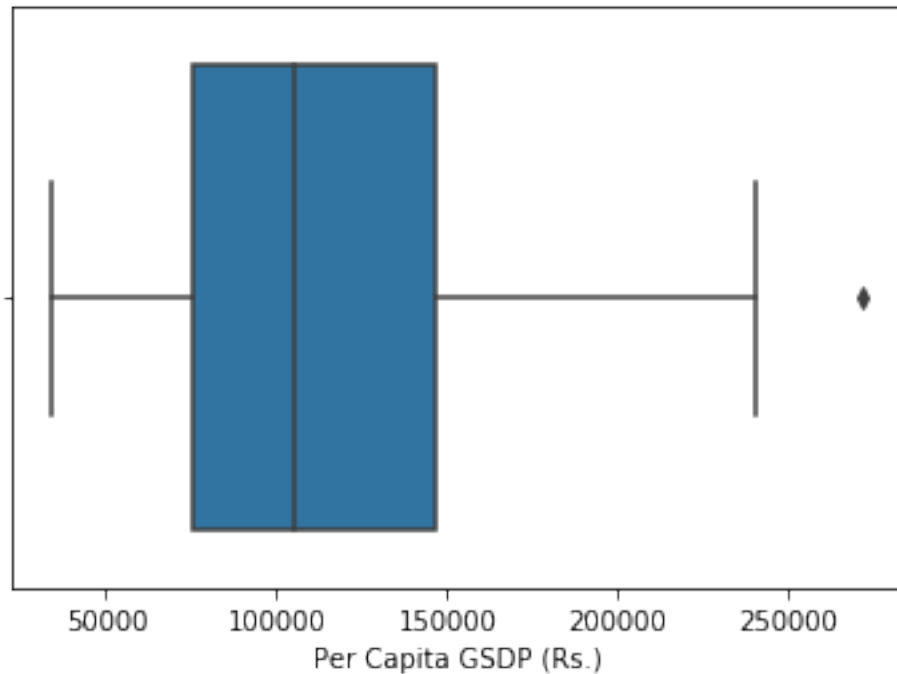
Category	C1	C2	C3	C4
Item				
Agriculture, forestry and fishing_%ofGSDP	14.119213	12.825977	23.727451	24.323490
Mining and quarrying_%ofGSDP	0.577805	1.769047	6.088662	2.613661
Manufacturing_%ofGSDP	13.498187	18.622130	12.383423	10.712459
Electricity, gas, water supply & other utility services_%ofGSDP	1.963097	2.357408	2.587440	1.847900
Construction_%ofGSDP	11.051090	6.932967	8.826341	9.764521
Trade, repair, hotels and restaurants_%ofGSDP	13.730076	10.443537	9.690206	11.783216
Transport, storage, communication & services related to broadcasting_%ofGSDP	6.689409	5.755616	6.872918	6.941761
Financial services_%ofGSDP	3.861928	6.189947	3.240065	3.294504
Real estate, ownership of dwelling & professional services_%ofGSDP	14.461049	15.710184	9.116395	10.365410
Public administration_%ofGSDP	3.503648	3.166513	4.454309	5.781998
Other services_%ofGSDP	7.907258	6.182617	7.201032	6.799089

SUB-CATEGORIES THAT CONTRIBUTE ABOUT 80% OF THE GSDP

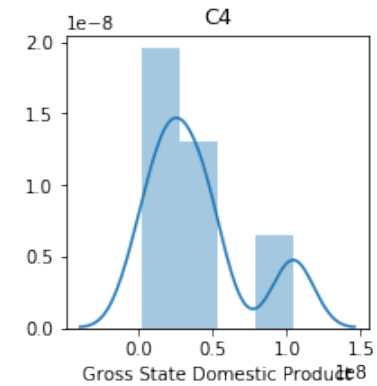
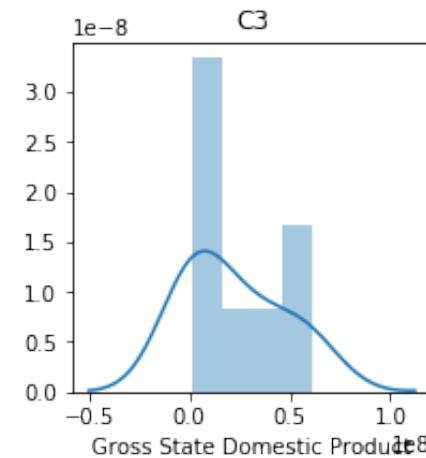
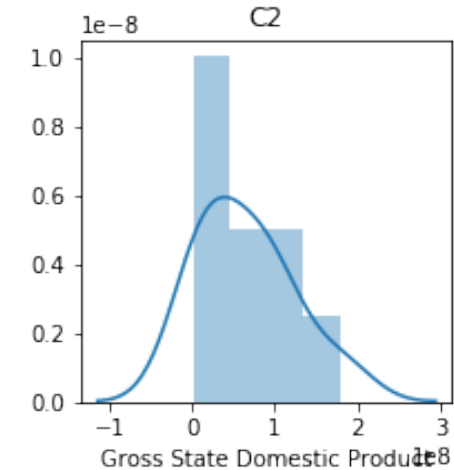
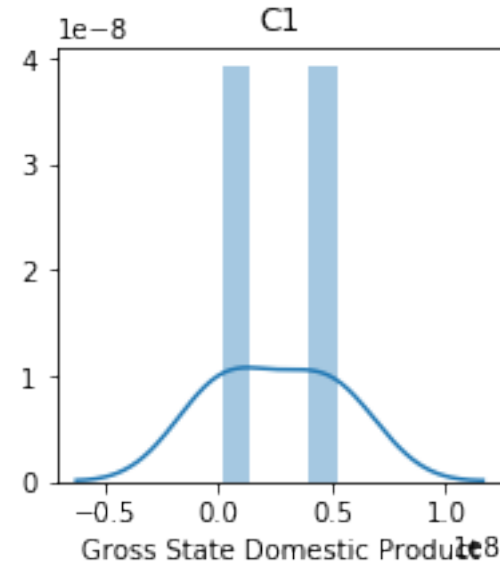


Part 1-B : OTHER INSIGHTS

BOX PLOT REPRESENTING THE SPREAD OF
CAPITA GSDP FOR ALL STATES(THE OUTLIER IS
GOA)



The distribution of C1's GDP follows almost a Normal Distribution, whereas C2 and C3 are slightly negatively skewed. There is an interesting pattern in C4 as we can see 2 bumps which indicates that C4 can be further sub categorised into 2 parts

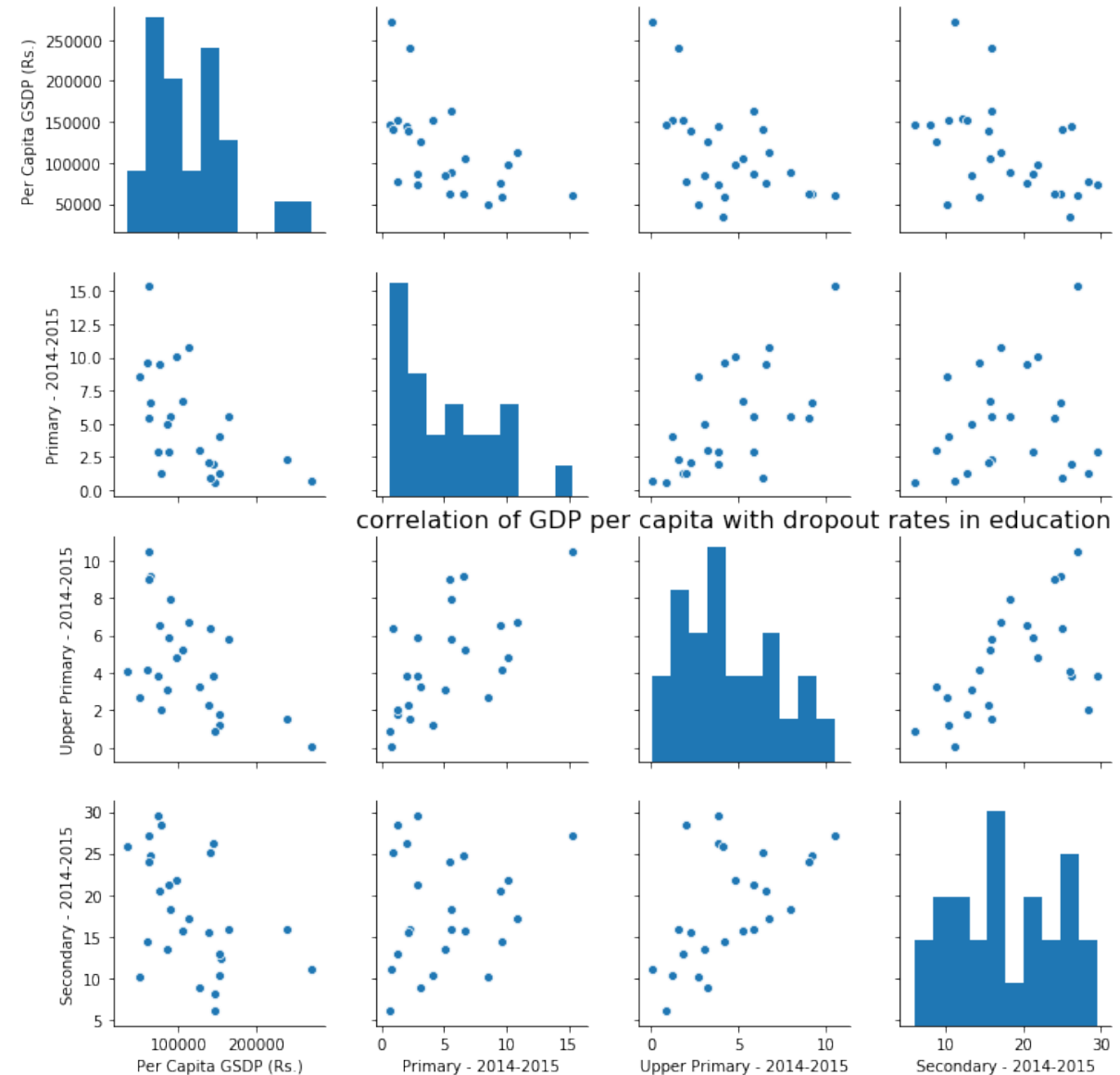


Part 2

In the pair plot the first column and the first row represents the correlation between dropout rates and GDP per capita. Here, we can clearly see that there is some amount of **NEGATIVE CORRELATION FOR ALL LEVELS OF EDUCATION** with GSDP per-capita' (i.e. the scatter points slant down from left to right).

Co-relation between Per Capita GDP and Drop out Rates for various levels of education

	Per Capita GSDP (Rs.)
Primary - 2014-2015	-0.555275
Upper Primary - 2014-2015	-0.542732
Secondary - 2014-2015	-0.465649



Part 2

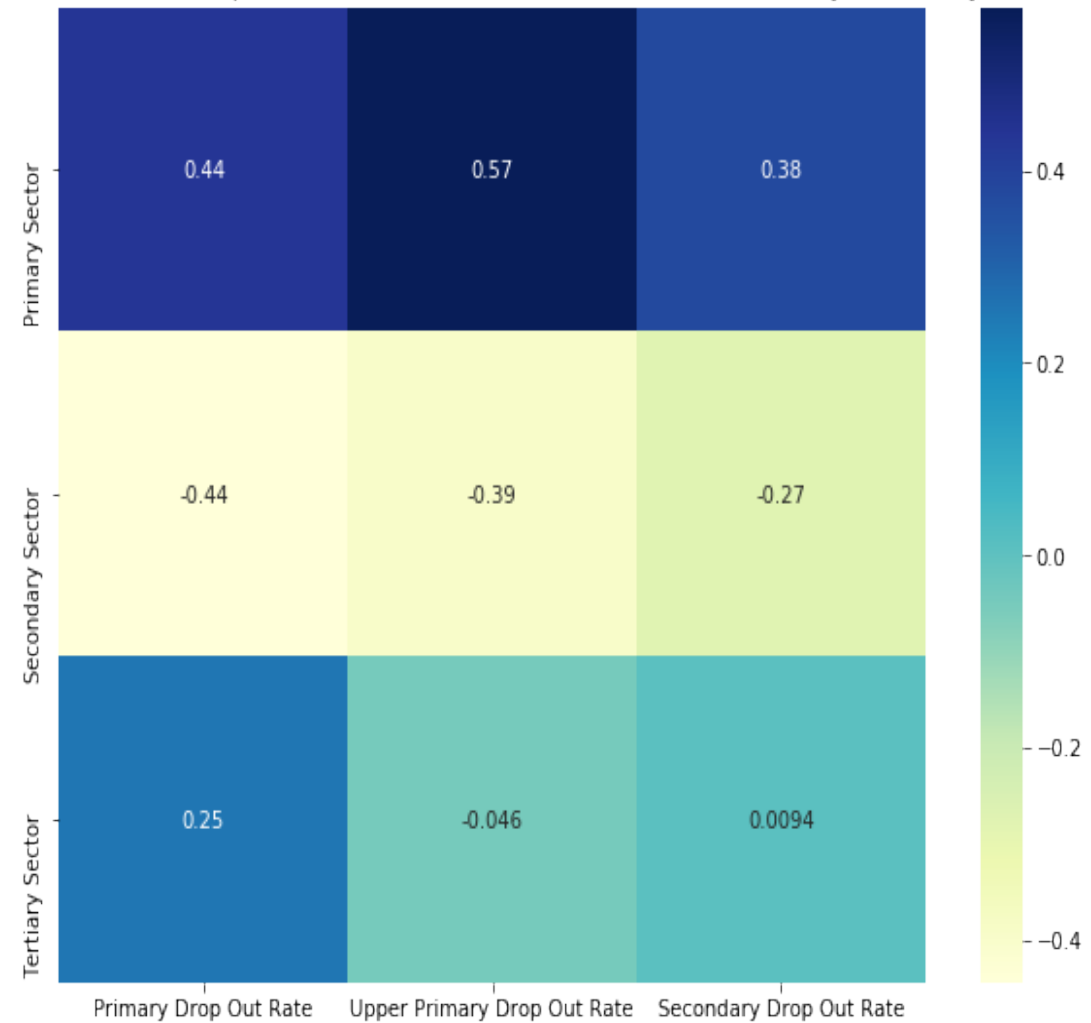
- 1) The drop out rates for all sectors are positively co-related with the GDP of PRIMARY SECTOR
- 2) The drop out rates for all sectors are negatively co-related with the GDP of PRIMARY SECTOR

Correlation between dropout rates and population

	Primary Drop Out Rate	Upper Primary Drop Out Rate	Secondary Drop Out Rate
Population ('00)	-0.000191	-0.0498	-0.058377

The expected trend is as population increases ,drop out rate increases (as population is negatively co related with literacy rate) . But here there is very weak negative co-relation between them

HEATMAP REPRESENTING correlation between dropout rate and %contribution of each sector (Primary, Secondary and Tertiary) to the total GDP



KEY INSIGHTS

- **1) Real estate and professional services play a key role in sectors where per capita GDP is high.**
- **2) Clearly there is negative co-relation between Per Capita Gsdp and Drop out rates . So we can infer that as Per Capita Income is directly co related with Gsdp , as Per capita Income increases the drop out rates tend to fall down**
- **3) As we can see in the heatmap that there is high positive co relation between drop out rates OF all levels of education and primary sector. WITH THIS WE CAN INFER THAT most of the people who drop out tend to work in the primary sector.**
- **4) Most of the occupations in the Secondary sector require education**

Hypothesis and Recommendations

- **HYPOTHESIS** : We know that Tertiary Sector is a major contributor in total Gsdp for most of the states. But for most of the top 5 states with highest per capita like goa , kerala, etc. the secondary sector is very active.

Thus we can hypothesize that by controlling Drop out rates of all levels of education, more skill labor is produced who get employed in skilled roles pertaining to secondary sector which intern increases the Per capita Gdp leading to overall economic growth of the state

Recommendation :

- 1)Govt should promote low cost education to control drop outs.
- 2) Real estate and freelancing laws of the state must be leisured to continue growth and expansion