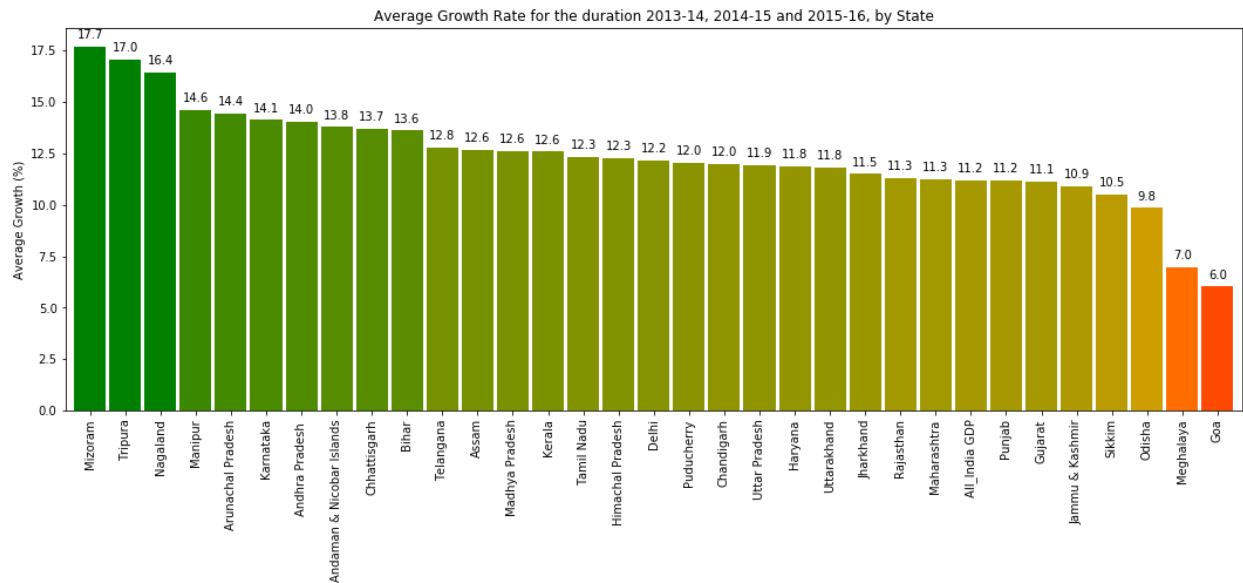


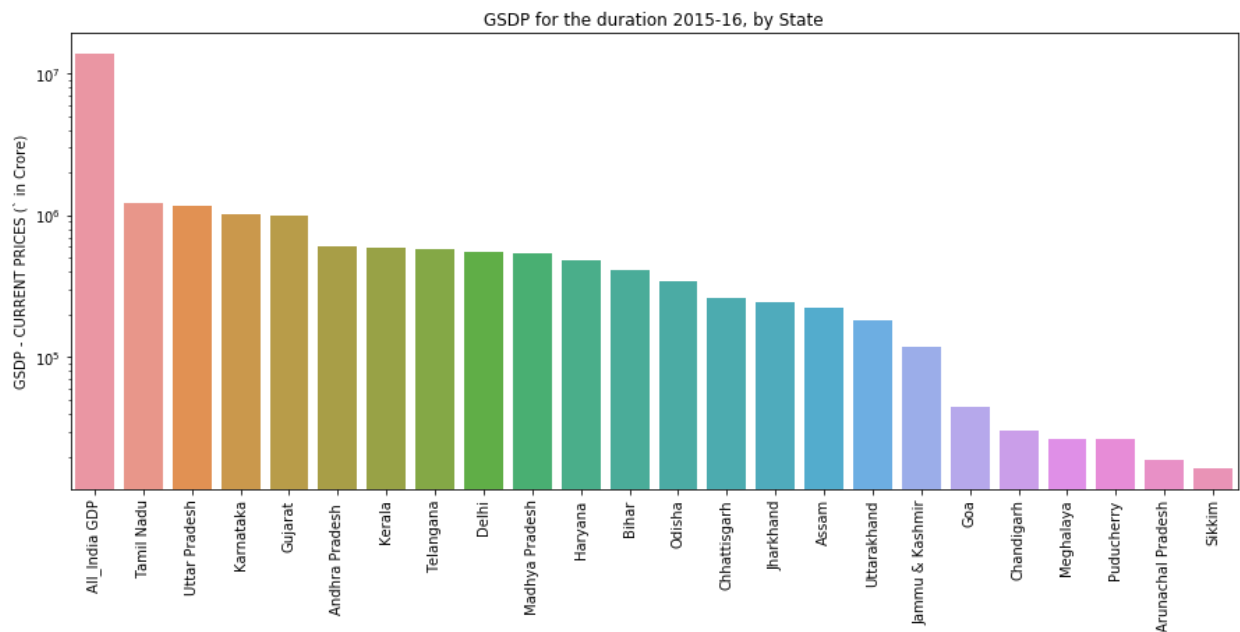
## GDP Analysis of the Indian States

### 1. Average Growth Rate for the duration 2013-14, 2014-15 and 2015-16, by State



From the above bar graph for Average Growth Rate for the duration 2013-14, 2014-15 and 2015-16, by State, we can infer that states of Mizoram, Tripura and Nagaland have been growing consistently fast, while Goa and Meghalaya have been struggling. We can relate this as well that Goa being only a high tourism based has no more progress on that. The other contrasting thing is that few North Eastern states have been leading in the growth scale while few others like Meghalaya, Sikkim have low paced. The geographic location been the same; this is shocking.

### 2. GSDP for the duration 2015-16, by State



For the duration 2015-16, the GSDP for most of the North-Eastern states is low.

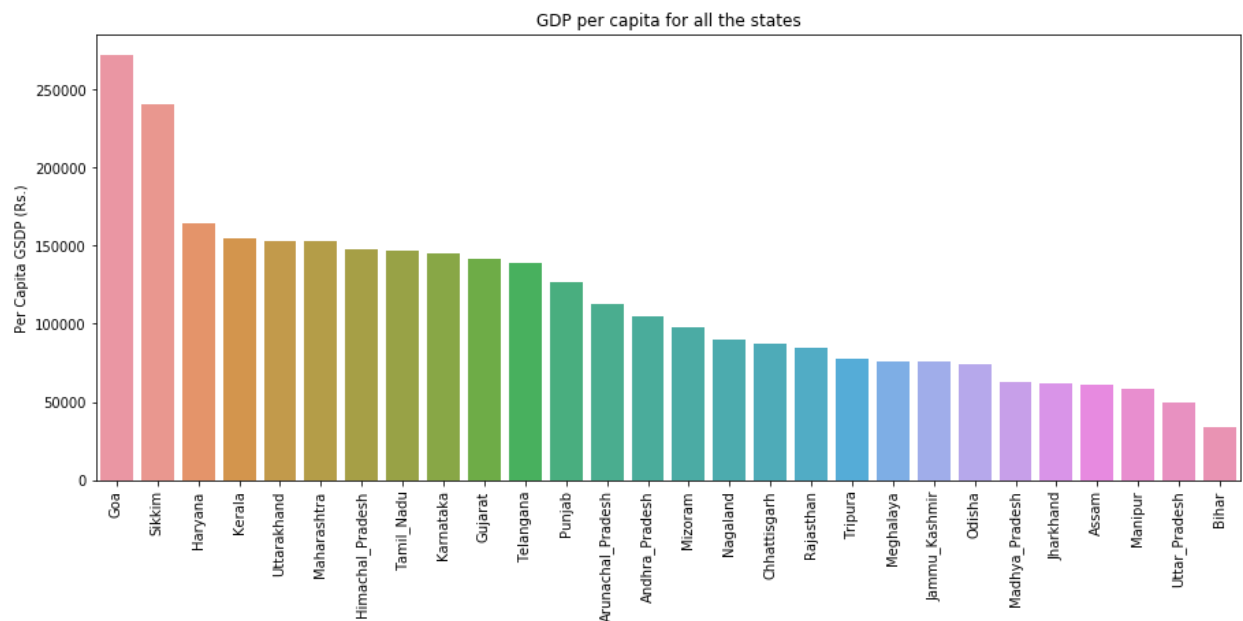
From the above bar graph for GSDP for the duration 2015-16, by State, we can infer that top 5 states in terms of GSDP (2015-16) are -

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

, while bottom 5 states in terms of GSDP (2015-16) are -

1. Sikkim
  2. Arunachal Pradesh
  3. (Union Territory of Puducherry)
  4. Meghalaya
  5. (Union Territory of Chandigarh)
  6. Goa
  7. Jammu & Kashmir
- Explicitly mentioned UT in Brackets.

### 3. GDP per capita for all the states for 2014-15



From the above bar graph for GSDP per capita for the duration 2014-15, we can infer that top 5 states in terms of GSDP per capita (2014-15) are -

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

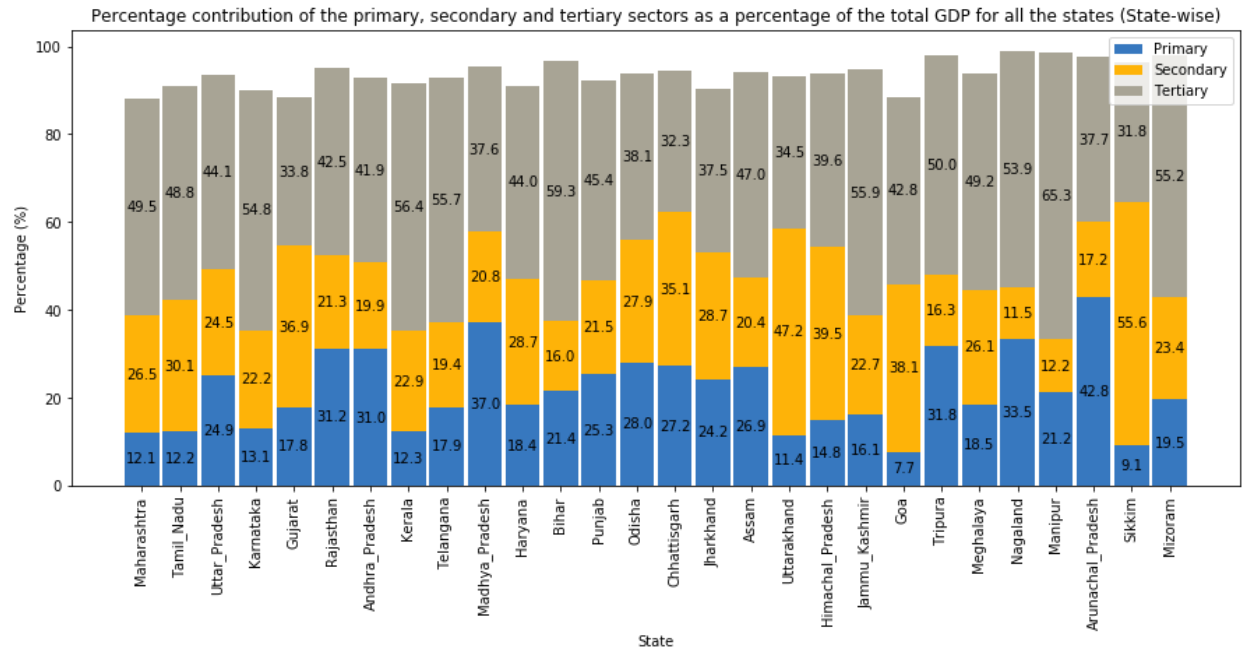
, while bottom 5 states in terms of GSDP per capita (2014-15) are -

1. Bihar
2. Uttar Pradesh
3. Manipur

4. Assam
5. Jharkhand

**Ratio of the highest per capita GDP to the lowest per capita GDP is 8**

4. Contribution of the primary, secondary and tertiary sectors as a percentage of the total GDP for all the states (in decreasing order of GDP)



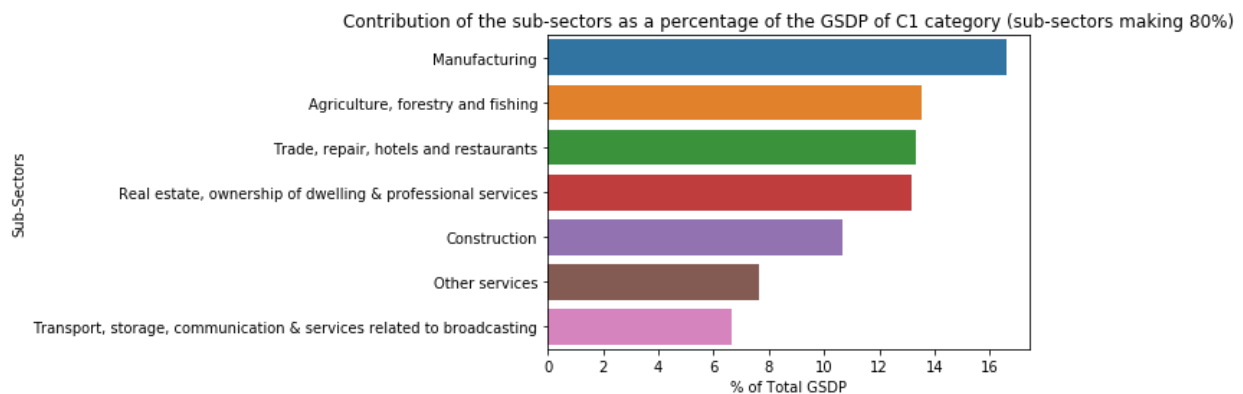
For most of the Indian states, Tertiary Sector forms about 50% of their GDP except for few outliers like Uttarakhand and Sikkim where Secondary Sector contributes to about 50% of the GDP. The top states in terms of GDP like Maharashtra, Tamil Nadu should continue investing in Tertiary sector, but are poor at the Primary ones. They should make a bit more investment in it. Also, if we use inference from Average Growth Percentage of these states, they have been at the medium pace, so if the geographic and demographics of the states are fortunate, the states can try seeing some good peak in growth rate if they experiment investing in the Crops, Forestry, etc. as well. States of Sikkim and Uttarakhand have huge potential of Tertiary Sector like Tourism; they should invest in it also. These states and Goa are very poor at Primary Sector, they can try uplifting it via investing in Livestock, Fishing, Aquaculture.

5. Categorizing the Indian states into 4 categories based on the per capita GDP (C1 with the highest (86%-100%), C2 (51%-85%), C3 (21%-50%) and C4 (0%-20%) with the lowest) and seeing the percentage contribution of sub-sectors

- Contribution of the sub-sectors as a percentage of the GSDP of C1 category (sub-sectors making 80%)

**C1 category states are: -**

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



***In case of C1 category states, Tertiary and Secondary Sectors are more accounting to the GDP. We can also see Agriculture (which is a Primary Sector) being among the top two. We see Manufacturing to be boon for C1. These states can continue investing in real estate, agriculture, trade and manufacturing; but should also try making small investments in construction and transport.***

Top 3 sub-sectors are -

Manufacturing  
Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants

Top 4 sub-sectors are -

Manufacturing  
Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants  
Real estate, ownership of dwelling & professional services

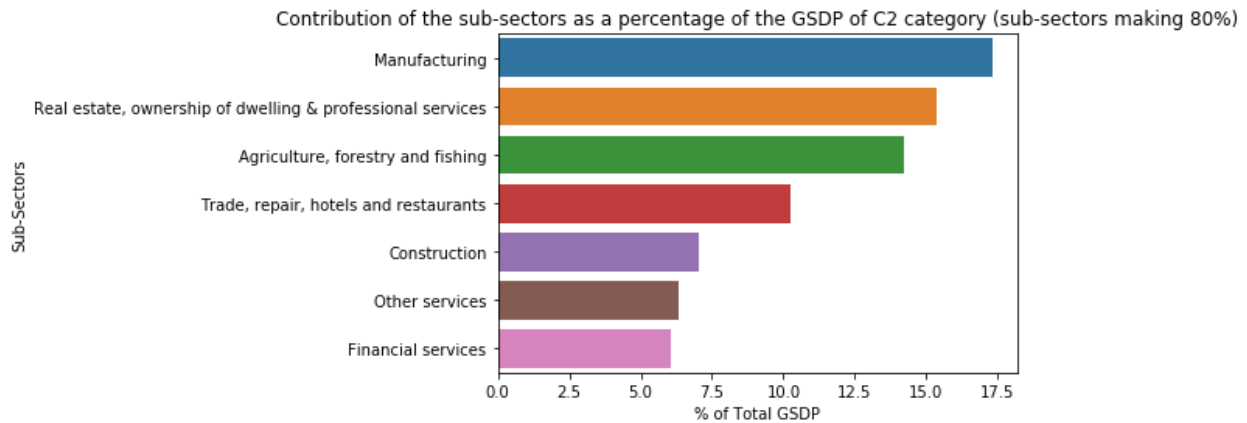
Top 5 sub-sectors are -

Manufacturing  
Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants  
Real estate, ownership of dwelling & professional services  
Construction

- Contribution of the sub-sectors as a percentage of the GSDP of C2 category (sub-sectors making 80%)

**C2 category states are: -**

1. Maharashtra
2. Himachal\_Pradesh
3. Tamil\_Nadu
4. Karnataka
5. Gujarat
6. Telangana
7. Punjab
8. Arunachal\_Pradesh
9. Andhra Pradesh



***Manufacturing has been the top most contribution for these states. Sectors like real estate, agriculture, trade are fair contributors so states can invest in these for a good GDP. Construction and financial services seem to be a low contributor, CMs should invest a bit in it also.***

Top 3 sub-sectors are -

Manufacturing  
Real estate, ownership of dwelling & professional services  
Agriculture, forestry and fishing

Top 4 sub-sectors are -

Manufacturing  
Real estate, ownership of dwelling & professional services  
Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants

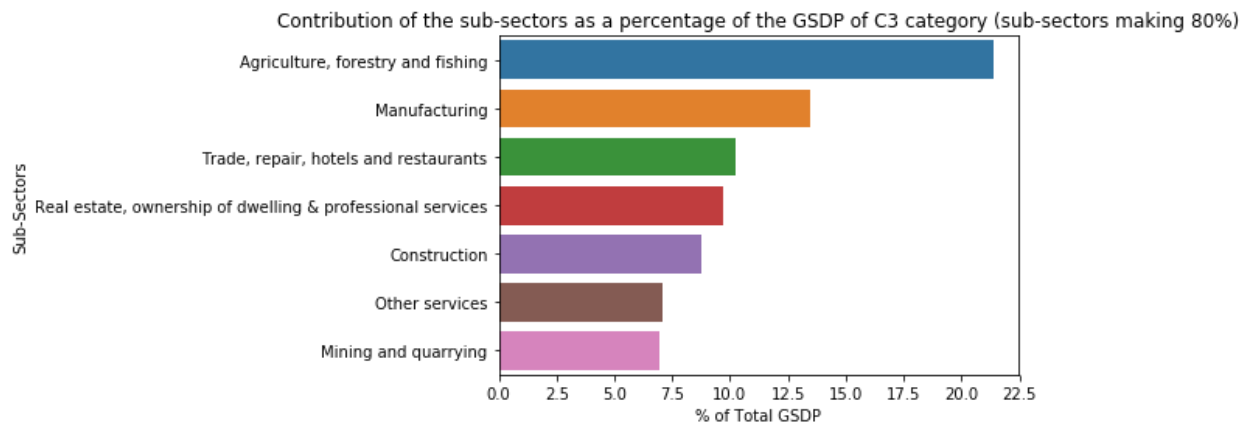
Top 5 sub-sectors are -

Manufacturing  
Real estate, ownership of dwelling & professional services  
Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants  
Construction

- Contribution of the sub-sectors as a percentage of the GSDP of C3 category (sub-sectors making 80%)

**C3 category states are: -**

1. Mizoram
2. Nagaland
3. Chhattisgarh
4. Rajasthan
5. Tripura
6. Meghalaya
7. Jammu & Kashmir
8. Odisha



***Agriculture has been a very high contributor for this category in the GDP. But the peculiar thing is that having Rajasthan (water scarce state) in the category (where agriculture is prominent) is ironic. This category is performing bad in all other sectors. That means there is huge opportunities for the state CMs to take any of the few sectors as per their geography and demography and invest in them as well. Real estate, construction and mining are mediocre here and can be taken care of.***

Top 3 sub-sectors are -

Agriculture, forestry and fishing

Manufacturing

Trade, repair, hotels and restaurants

Top 4 sub-sectors are -

Agriculture, forestry and fishing

Manufacturing

Trade, repair, hotels and restaurants

Real estate, ownership of dwelling & professional services

Top 5 sub-sectors are -

Agriculture, forestry and fishing

Manufacturing

Trade, repair, hotels and restaurants

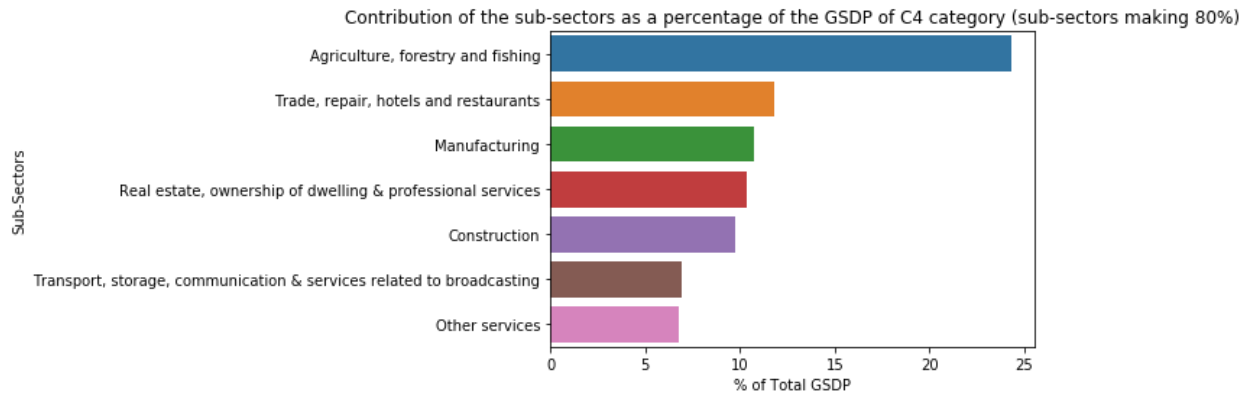
Real estate, ownership of dwelling & professional services

Construction

- Contribution of the sub-sectors as a percentage of the GSDP of C4 category (sub-sectors making 80%)

**C4 category states are: -**

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



***In C4, the characteristic traits are very similar to that of C3. Agriculture contributes extremely high. Trade, Manufacturing, Real estate and construction are the mediocre ones. The states here can continue encouraging on Agriculture, Forestry and Fishing; but should also get their focus on other sectors like real estate, construction and Transport for improving their GDP.***

Top 3 sub-sectors are -

Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants  
Manufacturing

Top 4 sub-sectors are -

Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants  
Manufacturing  
Real estate, ownership of dwelling & professional services

Top 5 sub-sectors are -

Agriculture, forestry and fishing  
Trade, repair, hotels and restaurants  
Manufacturing  
Real estate, ownership of dwelling & professional services  
Construction

## **Insights drawn -**

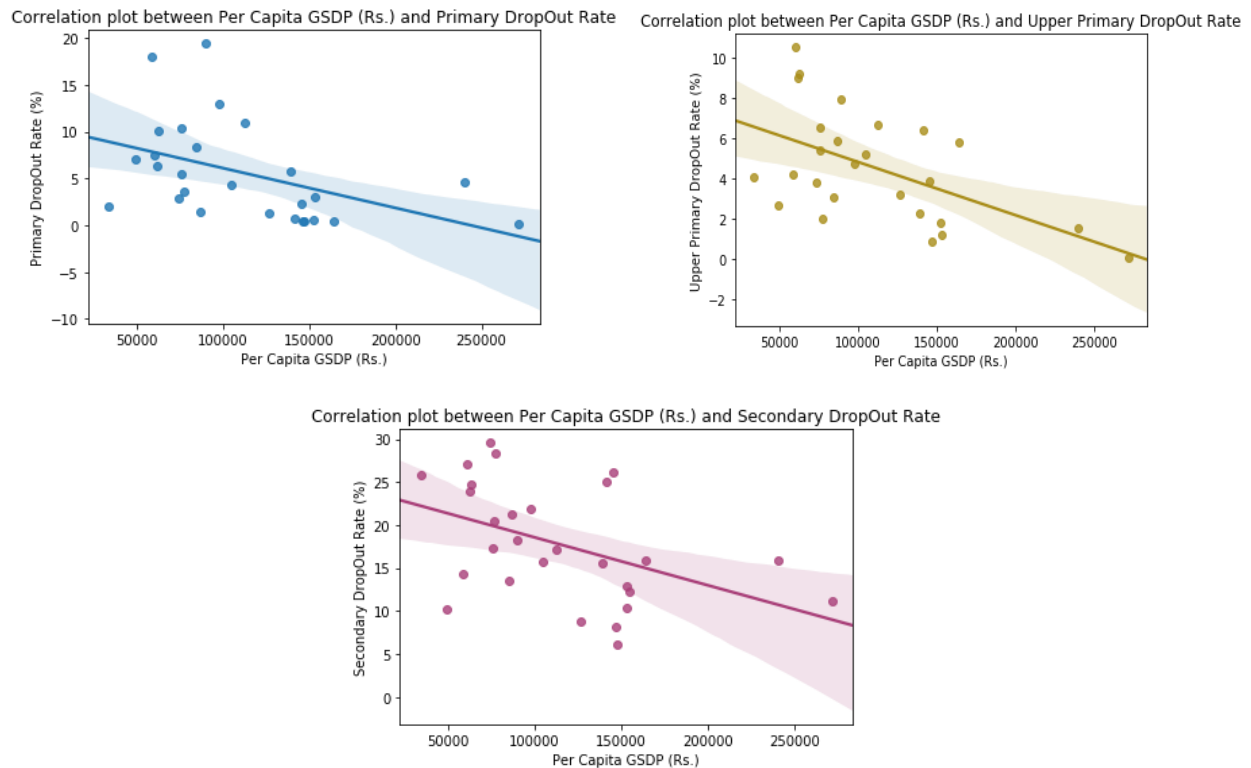
1. The GDP for category 'C1' is highly contributed by the sub-sector of Manufacturing. Apart from this, Agriculture, Trade and Real estate are among the key contributors to the GDP. For category 'C2' Manufacturing is the leading contributor. And for 'C3' and 'C4', Agriculture is way ahead contributor in regard to other sub-sectors.
2. It can be noted well that 'C1' and 'C2' categories are highly supported by Secondary Sector and 'C3' and 'C4' by Primary Sector.
3. We can clearly see that all categories have same sub-sectors in top 5 contributors to their GDPs. It is just that the sequence is different. That clearly shows that all categories have identified and focused towards the goal of better GDP.
4. It is peculiar to note that the sub-sector of Construction is always at the 5th position in all the categories.
5. We can infer that Manufacturing, Agriculture, and Real estate are the sub-sectors which seem to be correlated with high GDP.

## **Recommendations -**

1. For category 'C1' -
  - a. States like Sikkim, Goa, Kerala, Uttarakhand are good in tourism. They can continue progressing their investments towards it for high GDP.
  - b. All states have very high geographic spots of water; rivers and seas, they can spend well in agriculture, fishing, aquaculture also.
2. For category 'C2' -
  - a. States here like Maharashtra, Telangana, Gujarat, etc. are good spots of Manufacturing and also all states here like Tamil Nadu, Karnataka can invest well in the real estates.
  - b. Wildlife, Forestry and Agriculture can be the next key investments here as per the geographic locations of these states.
3. For category 'C3' -
  - a. These are the mediocre states and can upskill the public there so that Manufacturing also starts contributing well in the GDP.
  - b. States like Rajasthan, Odisha, Mizoram, J & K have good tourist spots and the CMs there can invest in Tourism well for higher GDP contributions.
4. For category 'C4' -
  - a. These states like Bihar, Jharkhand, Uttar Pradesh, etc. are very poor in GDPs. It is expected that public is encouraged to start their small to medium scale industries in whatever skill they can master. State CMs can focus on Manufacturing here.
  - b. These states have good mining geography and that can be the next key investment for the high GDP.



6. Correlation of GDP per capita with dropout rates in education (primary, upper primary and secondary) for the year 2014-2015 for each state.



Per Capita GSDP (Rs.) and Primary Dropout Rate are negatively correlated. We can see that the states with low Per Capita GSDP have witnessed high dropouts from the Primary education, and the vice-versa. The regression line is falling and states the same.

Per Capita GSDP (Rs.) and Upper Primary Dropout Rate are negatively correlated. We can see that the states with low Per Capita GSDP have witnessed high dropouts from the Upper Primary education, and the vice-versa. The regression line is falling and states the same.

Per Capita GSDP (Rs.) and Secondary Dropout Rate are negatively correlated. We can see that the states with low Per Capita GSDP have witnessed high dropouts from the Secondary education, and the vice-versa. The regression line is falling and states the same.

1. Education is playing a crucial factor in the states' GSDP. This can be seen clearly in all 3 scatter plots above that as the dropout rates are high, the per capita GSDP are low and vice-versa.
2. Also, we can see that high percentage of dropouts happen in Primary (about 20%) and Secondary education (about 30%) as compared to Upper Primary education (about 10%).
3. The states' GSDP from the industries can thrive only when there is an availability of educated and skilled labor. And if the state doesn't have low education dropouts, they cannot target for high per capita GDP.