

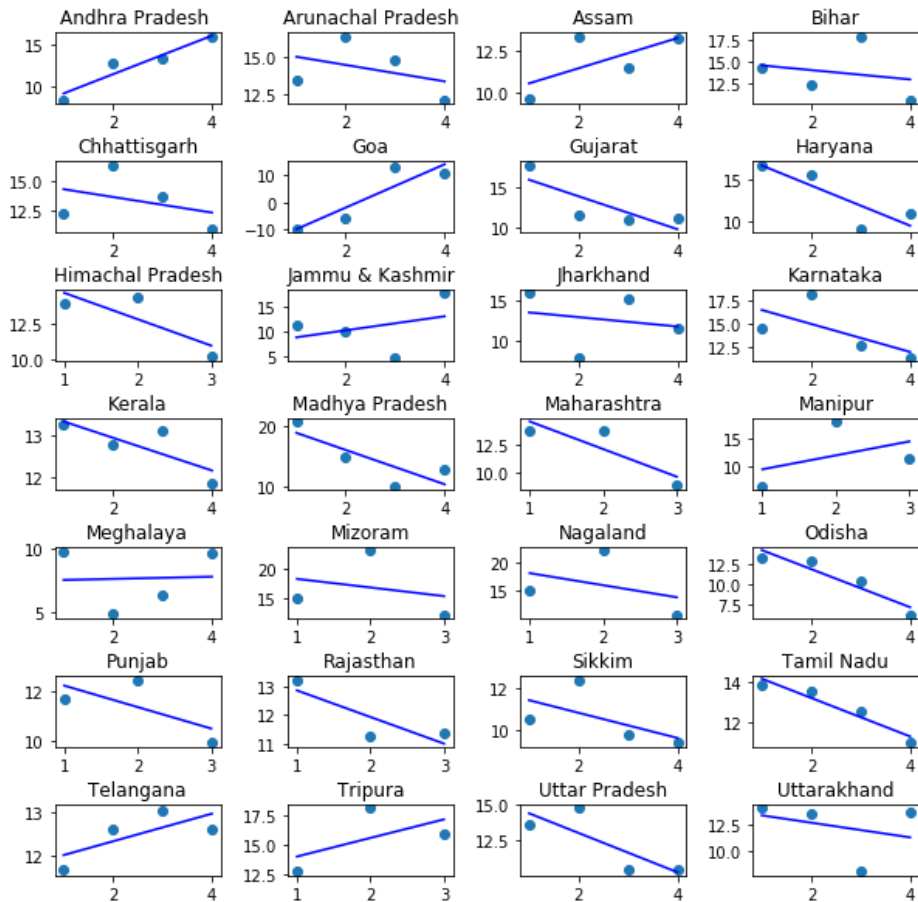
# NitiAyog Data Analysis on GDP and Per Capita

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# GDP Analysis for Part 1A

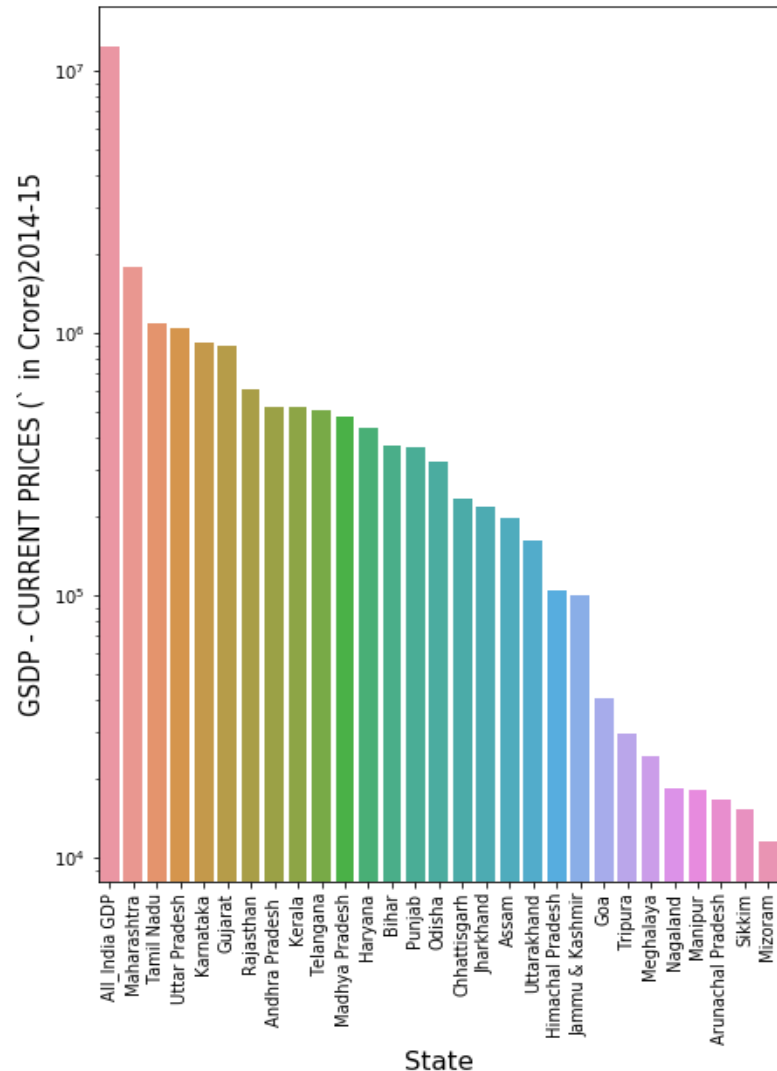
# Comparing the %Growth rates of states



**Comparing the growth rates of the states by finding out the slope for each state and also by visualising the graphs**

1. If we want to compare 2 states growth rate we should plot the % Growth rate of all individual states. Then to compare the growth between 2 states we just need to look at the base point which gives us the minimum GDP and then the slope of the line which gives us the growth rate of that state.
2. If we look at the growth rates of different states we can find that Goa, Manipur and Andhra Pradesh are the fastest growing states and Madhya Pradesh, Maharashtra and Odisha are the slowest growing states
3. The Nations growth has been decelerating by 1.393%
4. The homestate Karnataka has been decelerating at the rate of -1.5%. Thus when compared to the nations growth rate Karnataka is little slower by 0.107%

# GDP of the states for the year 2015-16



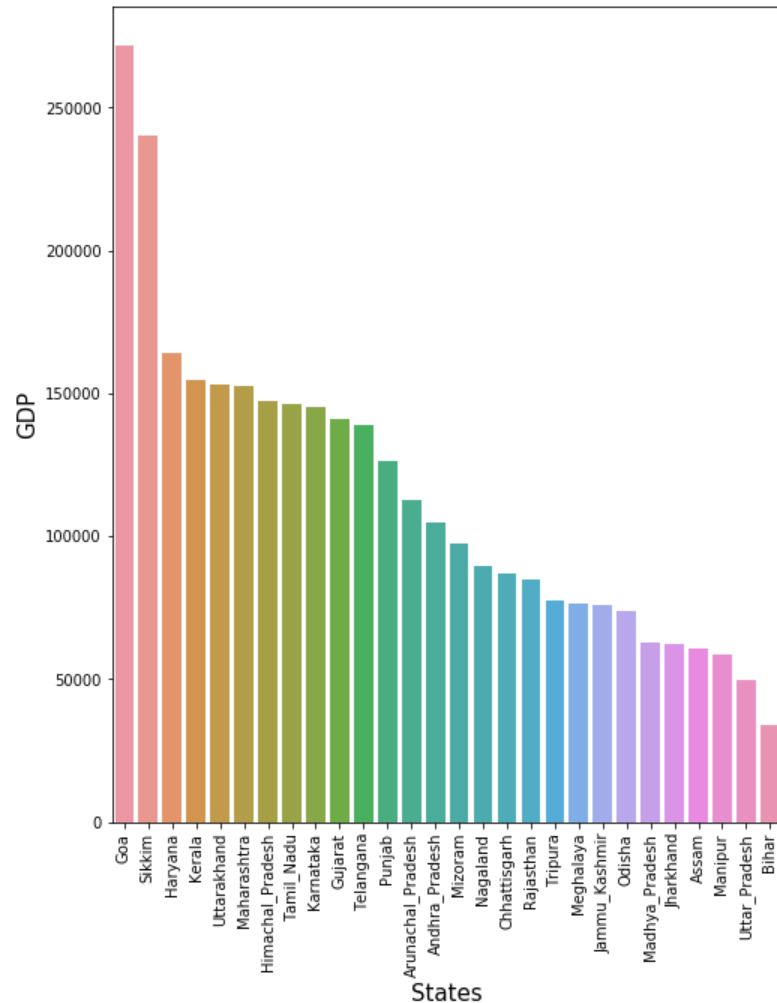
1. Bar Graph is the best plot to compare GDP'S of different states for a single year like 2015-2016
2. Top 5 states which has highest GDP :
  1. Maharashtra
  2. TamilNadu.
  3. Uttar Pradesh
  4. Karnataka
  5. Gujarat
3. Bottom 5 states which has lowest GDP :
  1. Mizoram
  2. Sikkim
  3. Arunachal Pradesh
  4. Manipur
  5. Nagaland
4. To find out which states are performing poorly we would need 2 data points
  1. Average GDP of individual states.
  2. Growth rates of the individual states.

So lets list down the states in the order of ascending average GDP and then lets find out among them whose growth rates are growing and whose growth rates are decelarting. The decelarting states with lowest GDPs are the ones which are doing very poorly.

# GDP Analysis for Part 1B

# GDP Per Capita for all States

## GDP for all states



The Top and Bottom 5 states which has highest and lowest GDP...

1. The top 5 states being :

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

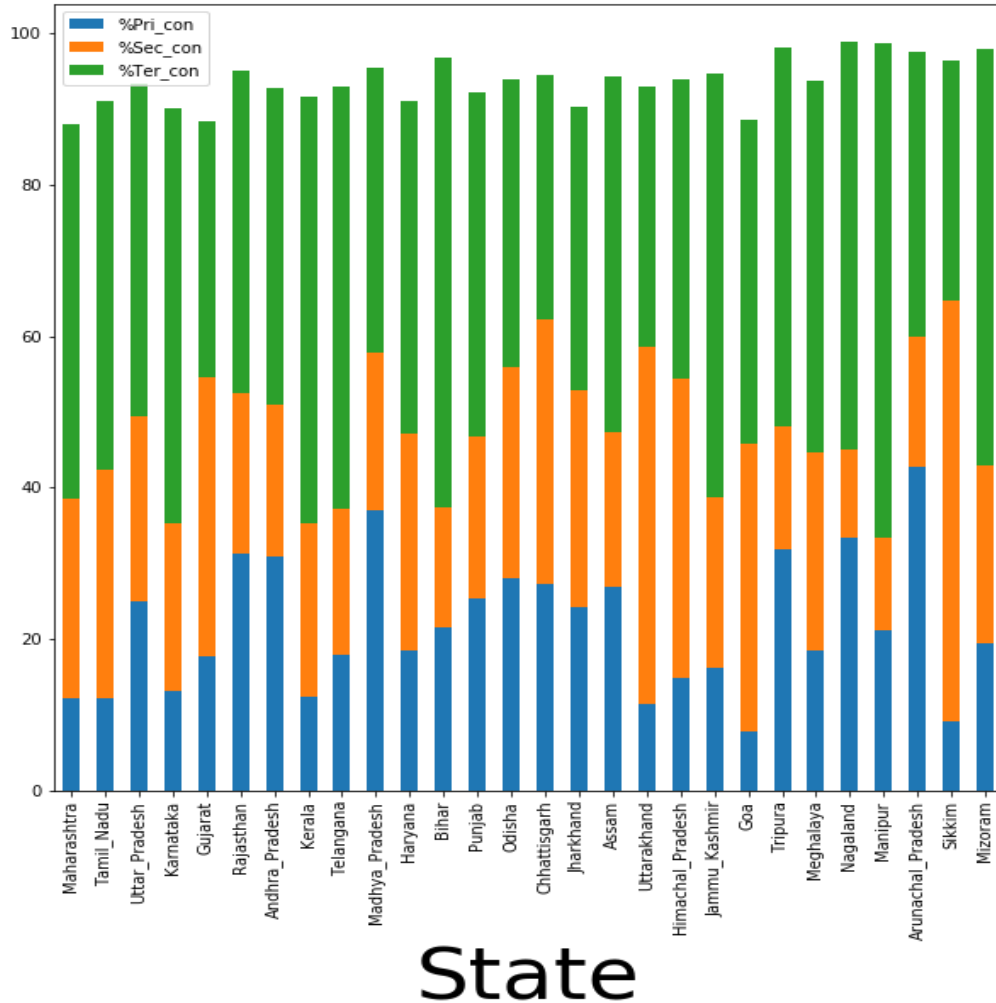
2. The bottom 5 states :

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

The ratio of the highest per capita GDP to the lowest per capita GDP

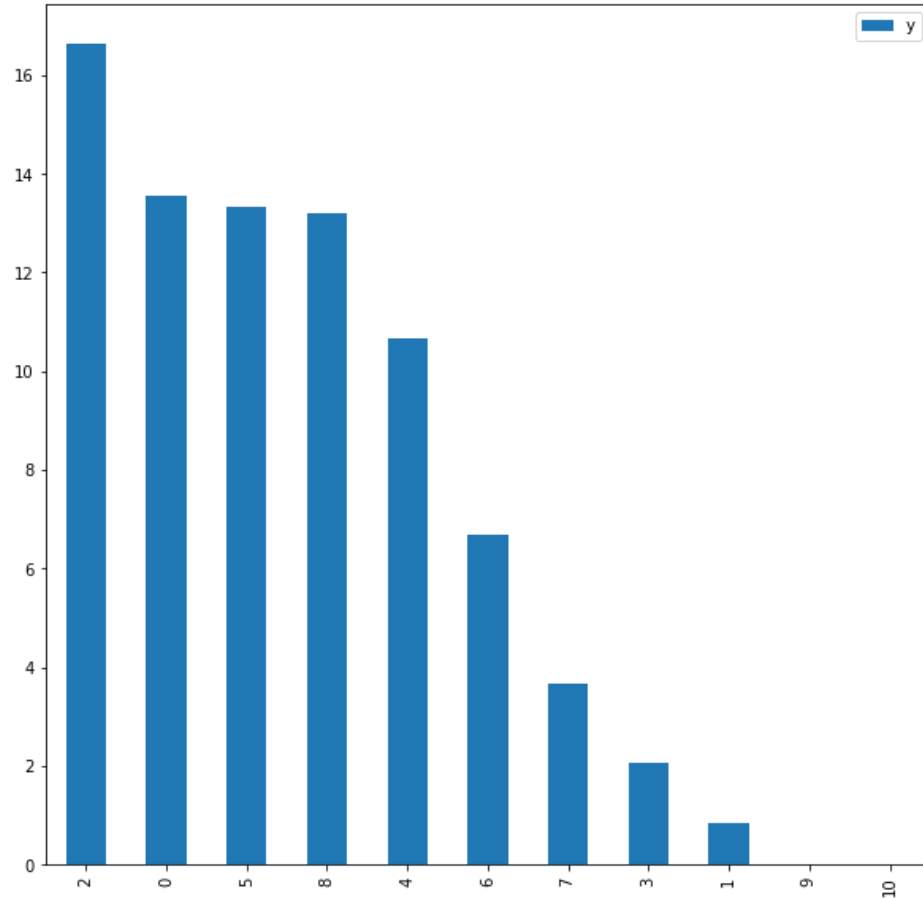
1. From the graph above we understood Goa being the state with highest per capita GDP and Bihar being the lowest per capita GDP the ratio between them is 8:1
2. That means Goa's per capita GDP is 8 times greater than Bihar per capita GDP

# Stacked bar graphs for primary, secondary and tertiary contributions of the states



- (Primary + Secondary + Tertiary) not equal to total GDP because there are taxes applicable on GSVA and again government provides subsidiary.
- So for total GSVA we have to add the taxes and then subtract the subsidiary given by government which is equal to GSDP

# C1 Category States sub sectors contribution

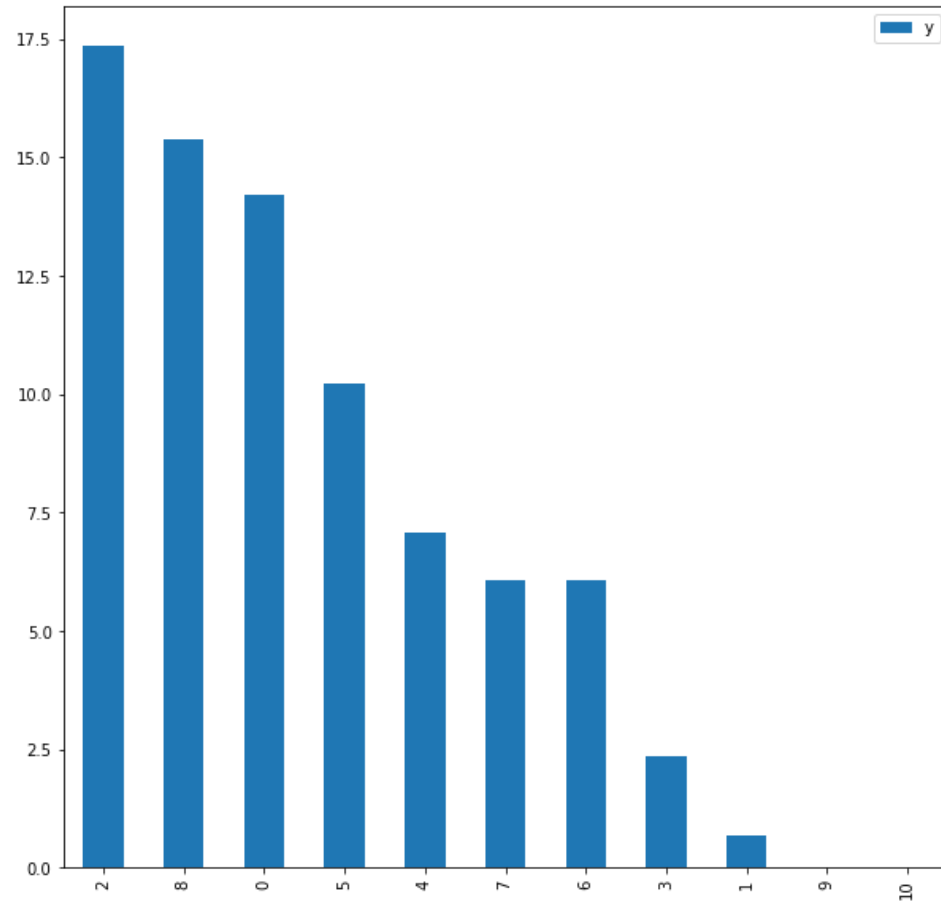


**The top sub sectors that contribute to the approximately 80% for C1 Category are as follows:**

1. Manufacturing
2. Agriculture, forestry and fishing
3. Trade, repair, hotels and restaurants
4. Real estate, ownership of dwelling & professional services
5. Construction
6. Transport, storage, communication & services related to broadcasting
7. Financial services
8. Electricity, gas, water supply & other utility services



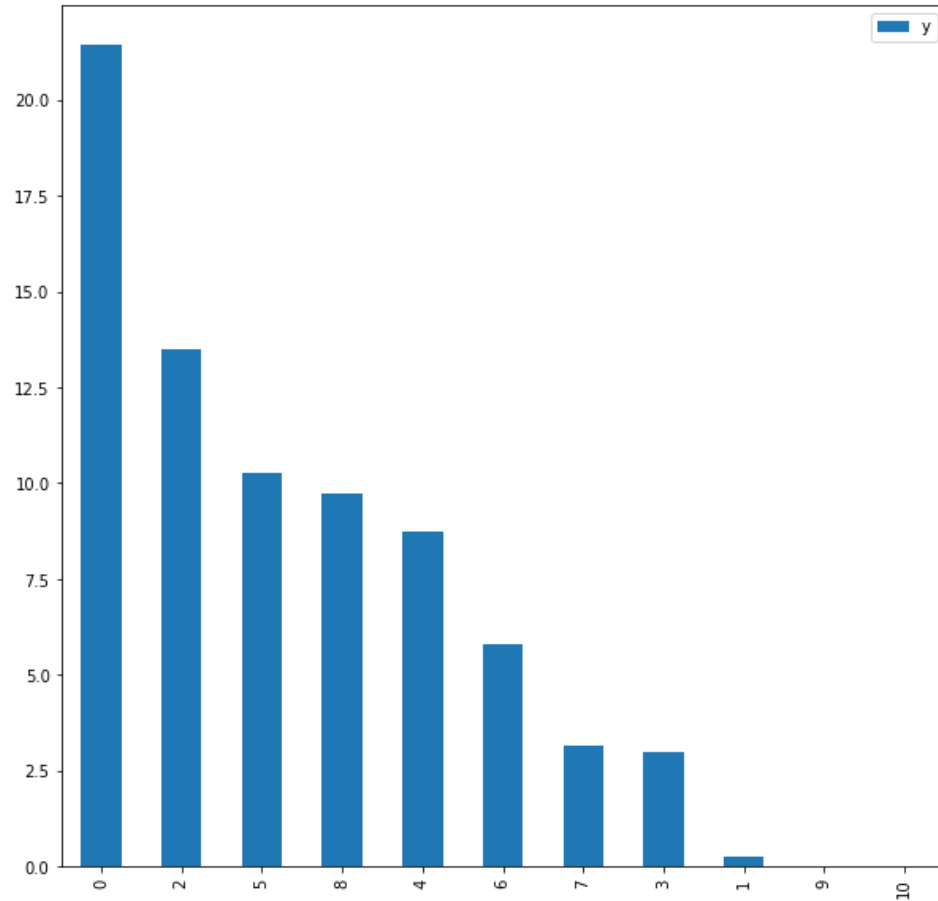
# C2 Category States sub sectors contribution



**The top sub sectors that contribute to approximately 80% for C2 Category in that order are as follows:**

1. Manufacturing
2. Real estate, ownership of dwelling & professional services
3. Agriculture, forestry and fishing
4. Trade, repair, hotels and restaurants
5. Construction
6. Financial services
7. Transport, storage, communication & services related to broadcasting
8. Electricity, gas, water supply & other utility services
9. Mining and quarrying

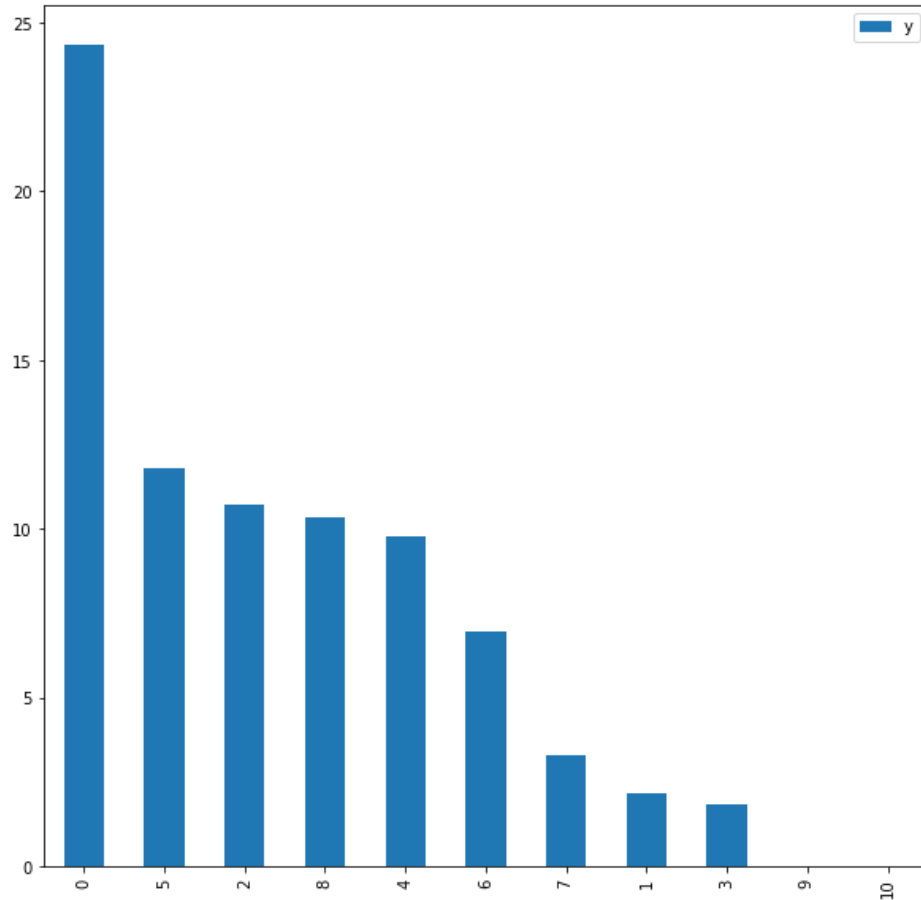
# C3 Category States sub sectors contribution



**The top sub sectors that contribute to approximately 80% for C3 Category in that order are as follows:**

1. Agriculture, forestry and fishing
2. Manufacturing
3. Trade, repair, hotels and restaurants
4. Real estate, ownership of dwelling & professional services
5. Construction
6. Transport, storage, communication & services related to broadcasting
7. Financial services
8. Electricity, gas, water supply & other utility services
9. Mining and quarrying

# C4 Category States sub sectors contribution



**The top sub sectors that contribute to approximately 80% for C4 Category in that order are as follows:**

1. Agriculture, forestry and fishing
2. Trade, repair, hotels and restaurants
3. Manufacturing
4. Real estate, ownership of dwelling & professional services
5. Construction
6. Transport, storage, communication & services related to broadcasting
7. Financial services
8. Mining and quarrying
9. Electricity, gas, water supply & other utility services

# Insights and Final Recommendations

## **Some of the other insights that we can draw are as follows:**

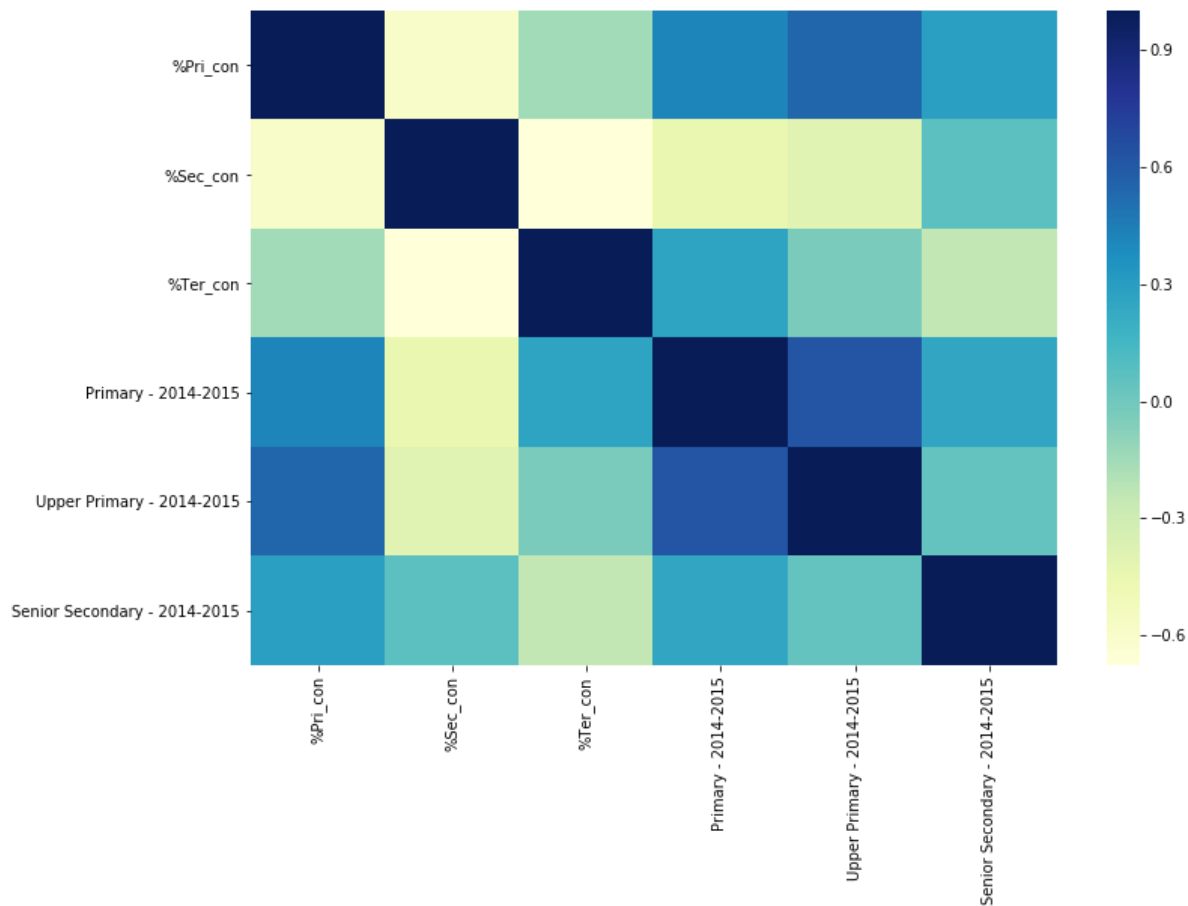
- Category C1 states are dominant in top four sectors of Manufacturing, Agriculture, Trade, Repair, hotels and restaurants and Real estate. This shows that there are 5 sub sectors are contributing to the overall per capita in C1 Category states, where as in C2 states 3 were sub sectors were dominant.
- C3 and C4 Category states were mainly dominant on Agriculture which contributes to approx 25% of its GDP
- All the categories should focus on Electricity and gas production sectors along with improving Water Supply and Other Utility services.
- All categories should also focus on Financial services as they are low across all categories and has lot of potential to reach wider population
- Agriculture, Manufacturing, Trade, Repair, hotels and restaurants and Real estate are the main sub sectors which contribute heavily to the nations GDP. These sectors also correlate to the high GDP as well.

## **Final Recommendations to improve Per Capita GDP per Category**

- For C1 Category states as these are good on 4 major categories and so to improve it is important to develop Transportation and Financial services which are upcoming. Improve the Road connectivity, expand the banks in rural locations and encourage the NBFCs in these states.
- For C2 Category states as these states the upcoming areas seems to be Trade, Construction and Financial services which are upcoming sub sectors. Improving Trade policies such as single window clearances for new businesses to start, Improving the construction sector by strengthening RERA for housing and commercial sector, expanding the banks in rural locations.
- For C3 and C4 Category states, these are mostly dominant on the Agriculture. So ensuring the power supply to these states is very important. This will improve the Electricity Sector as well as ensure the power to the farmers. Secondly improving the Financial services by increasing the banks and NBFC will improve the very needed financial support for the farmers and also improves the overall Per Capita GDPs in the states.

# GDP and Education Drop out rates - Part 2

# GDP and Education Drop out rates



## Correlation between schooling levels and GDP:

From the heat map the following observations are made:

1. For the states whose GSDP is high in the Primary sectors the drop out rates are directly correlated to all levels of schooling drop outs
2. For the states whose GSDP is high in secondary sectors the drop out rates are directly correlated to senior secondary and inversely correlated to Primary and Upper Primary level school drop outs.
3. For the states whose GSDP is high in Tertiary sectors the drop out rates are directly correlated to primary and inversely correlated to remaining schooling level drop outs.