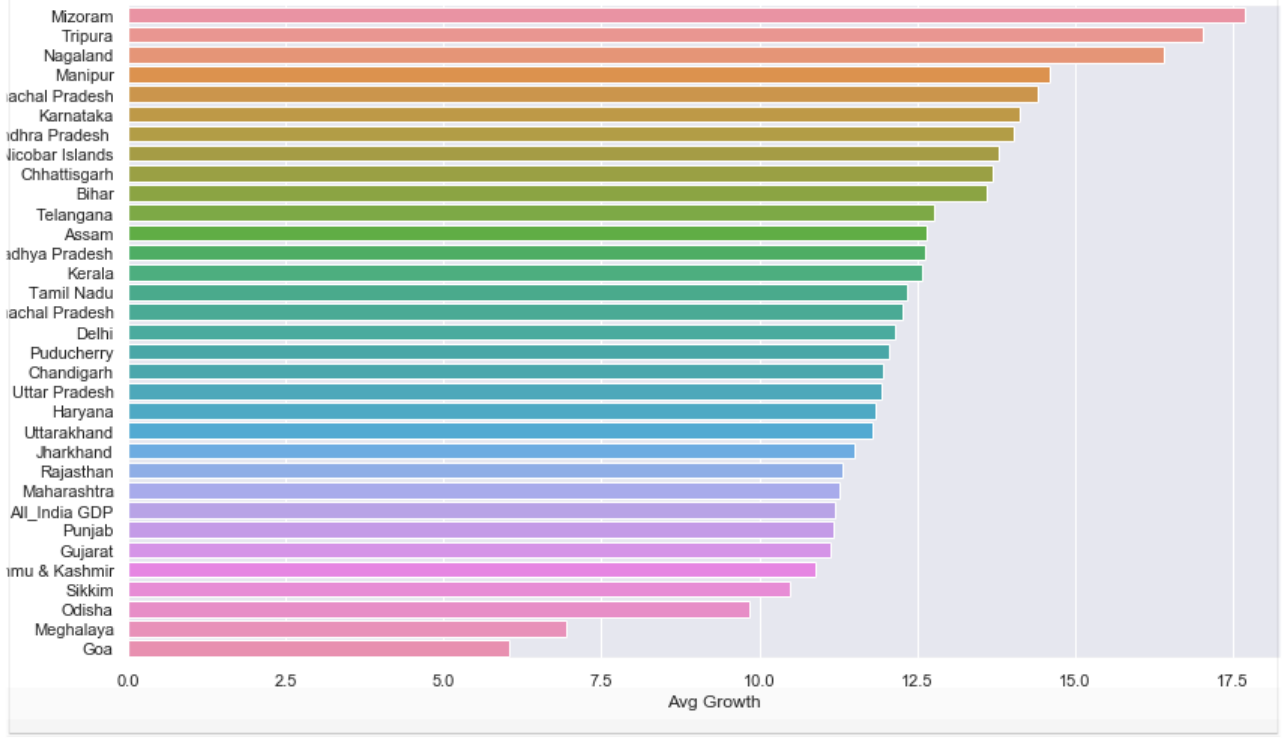
GDP Analysis

Rishabh Kashyap - 29 April 2019

```
re(figsize=(14,8))
barplot(x='Avg Growth', y=data11.index, data=data11)
```

```
matplotlib.pyplot.show(*args, **kw)>
```

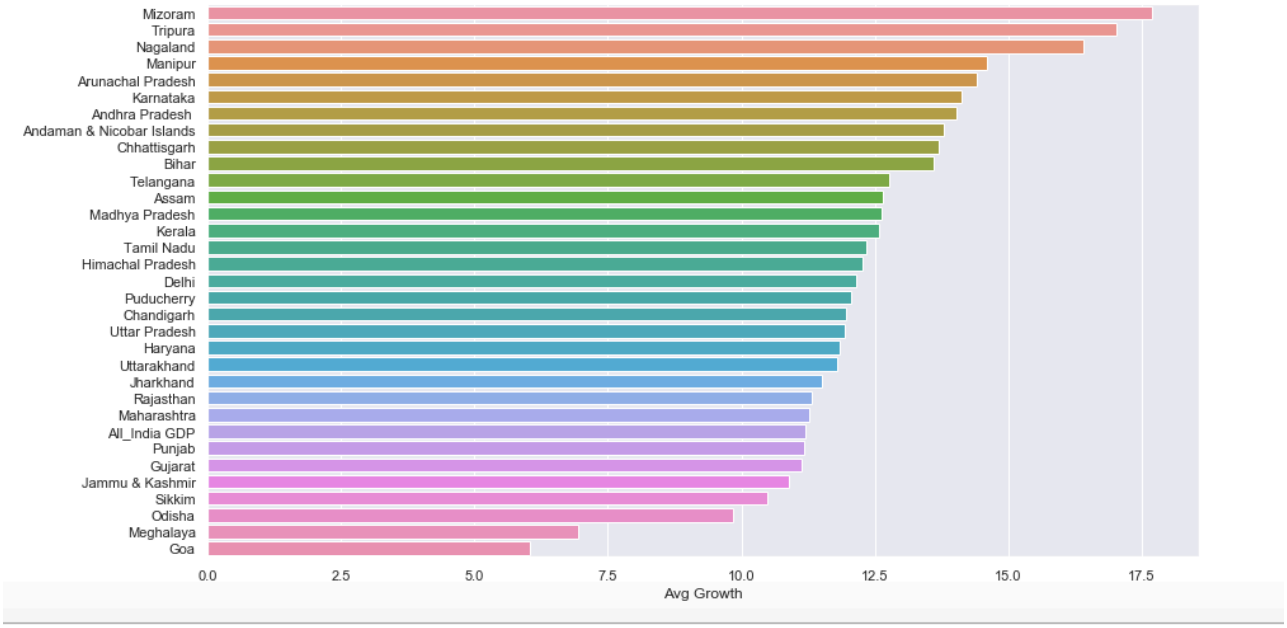


Part 1-A

In the very first part we try to find out the average growth rate of several Indian states. Through this we understand that Mizoram, Tripura, Nagaland, Manipur and Arunachal Pradesh are the best five performing states whereas Goa, Meghalaya, Odhisha, Sikkim and Jammu & Kashmir are worst performing states in terms of GDP.

```
plt.figure(figsize=(14,8))
ax = sns.barplot(x='Avg Growth', y=data11.index, data=data11)
plt.show
```

```
<function matplotlib.pyplot.show(*args, **kw)>
```



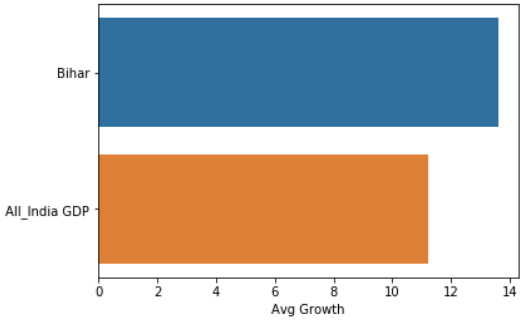

```
In [17]: home = (data11.loc[['Bihar','All_India GDP']]) #Extract home state and all India GDP
         home
```

Out[17]:

State	2013-14	2014-15	2015-16	Avg Growth
Bihar	12.30	17.92	10.59	13.603333
All_India GDP	12.97	10.65	9.99	11.203333

```
In [18]: sns.barplot(x='Avg Growth', y=home.index, data=home)
         plt.show
```

```
Out[18]: <function matplotlib.pyplot.show(*args, **kw)>
```




```
In [19]: #Bihar's GDP is higher than India's GDP
```

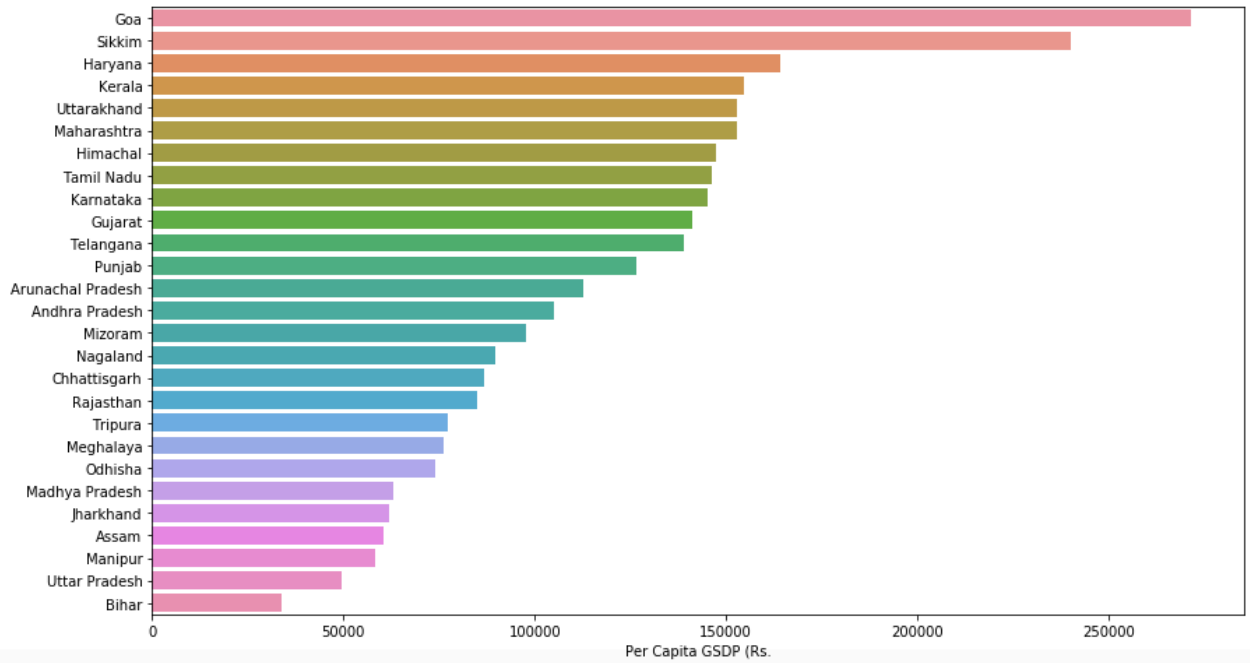
Next, we try to understand the growth of one state against the nation's GDP.

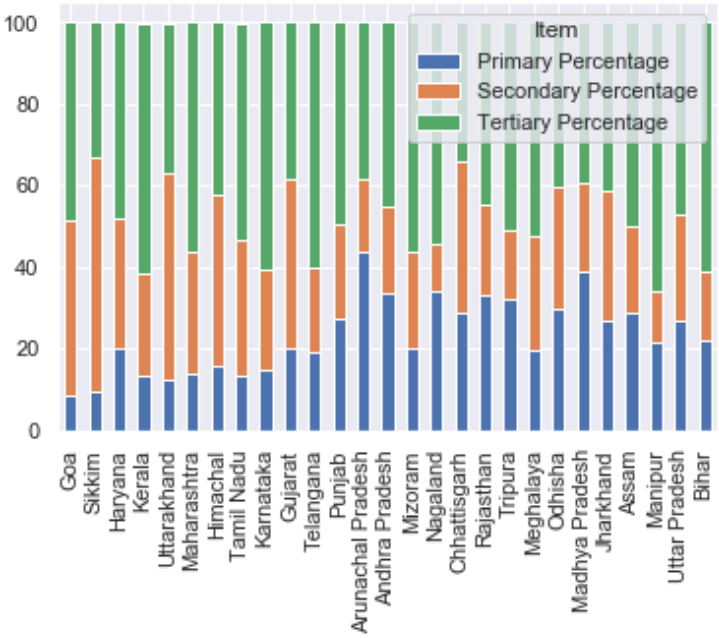
Part 1-B

In the very second part we plot Per Capita GDP for several Indian states to understand the actual citizen growth. Through this we understand that the producers of goods or services are not the states with best growth. States with best Per Capita GDP are Goa, Sikkim, Haryana, Uttarakhand and Maharashtra whereas states with worst Per Capita GDP are Bihar, Uttar Pradesh, Manipur, Assam and Jharkhand. Also the difference between best performing and worst performing states in 8:1 ratio.

```
plt.figure(figsize=(14,8))
ax = sns.barplot(x='Per Capita GSDP (Rs.', y=collated.index, data=collated)
plt.show
```

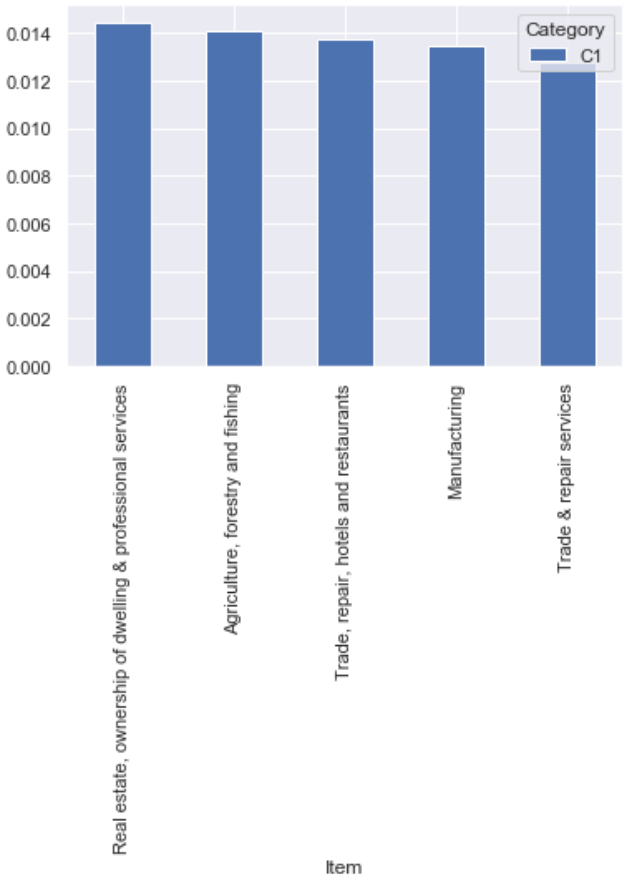
```
<function matplotlib.pyplot.show(*args, **kw)>
```

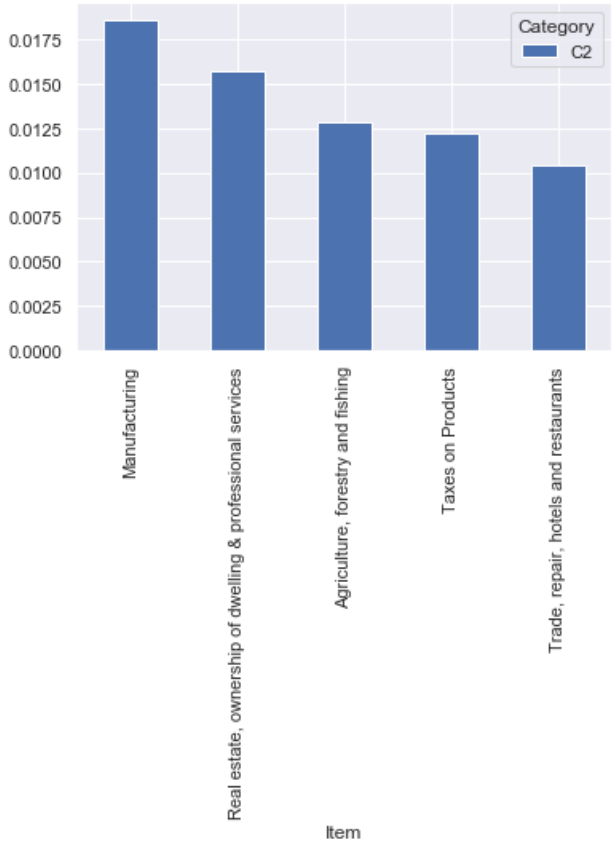


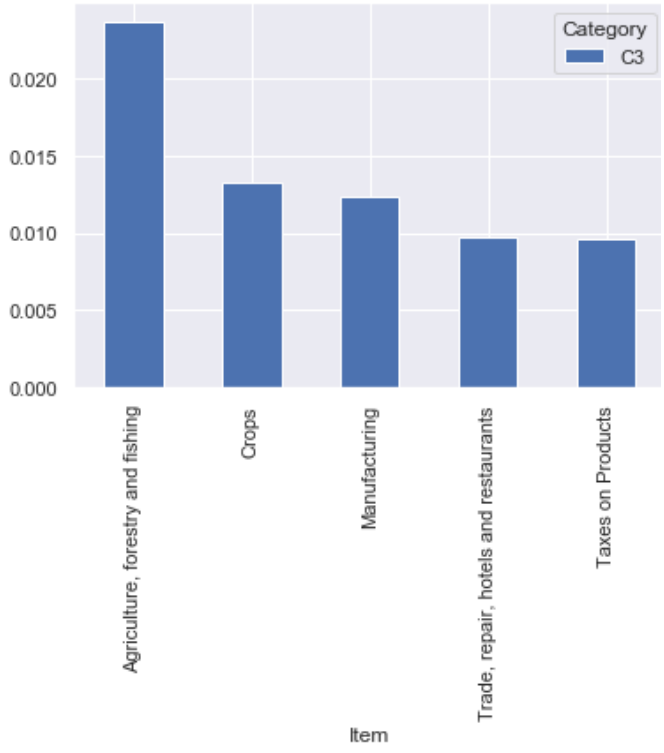


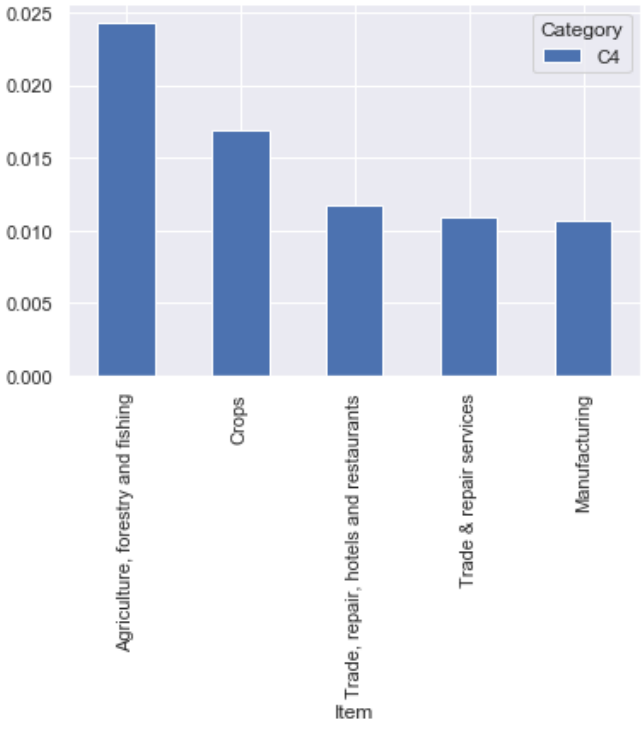
Next we try to understand the contribution of different sectors towards GDP.

Now we try to dive deeper to find out the best performing sub-sectors. For this we have divide the states into four group on the basis of their GDP.









Analysis

GDP is distributed uniformly in C1 category. However as we move towards C4 category, the data gets skewed.C1 even has better contribution from secondary and tertiary sectors which seems to increase the GDP.C1 depicts uniform consumerism across sectors.

Sub sectors like Real estate, ownership of dwelling & professional services, Manufacturing and Trade, repair, hotels and restaurants are related with high GDP.

Category C4 needs to focus on transport and services associated with it as well as mining, fishing & electricity. Category C3 should focus on fishing & mining storage, hotels & restaurants, air & water transport, communication services, electricity in secondary sector. Category C2 needs to focus on agriculture, crops, livestock, railways, water & air transport as well storage. Category C1 should also focus on agriculture, crops, mining, water & air transport, services incidental to transport, storage and communication services.

Overview of the data recommends that a high Population decreases per Capita GDP, even though GSDP is high. Hence C4 needs to plan for increasing awareness about family planning immediately and C2 should start this initiative too. However C3 and C1 have a lower GDP per Capita across sectors which they need to improve as their GSDP are the lowest. C1 has a huge requirement for educated and skilled labour.

At last we try to understand wether educated and skilled labour will become a problem in future by plotting a heat map between drop out rate and Per Capita GDP.