

GDP Analysis



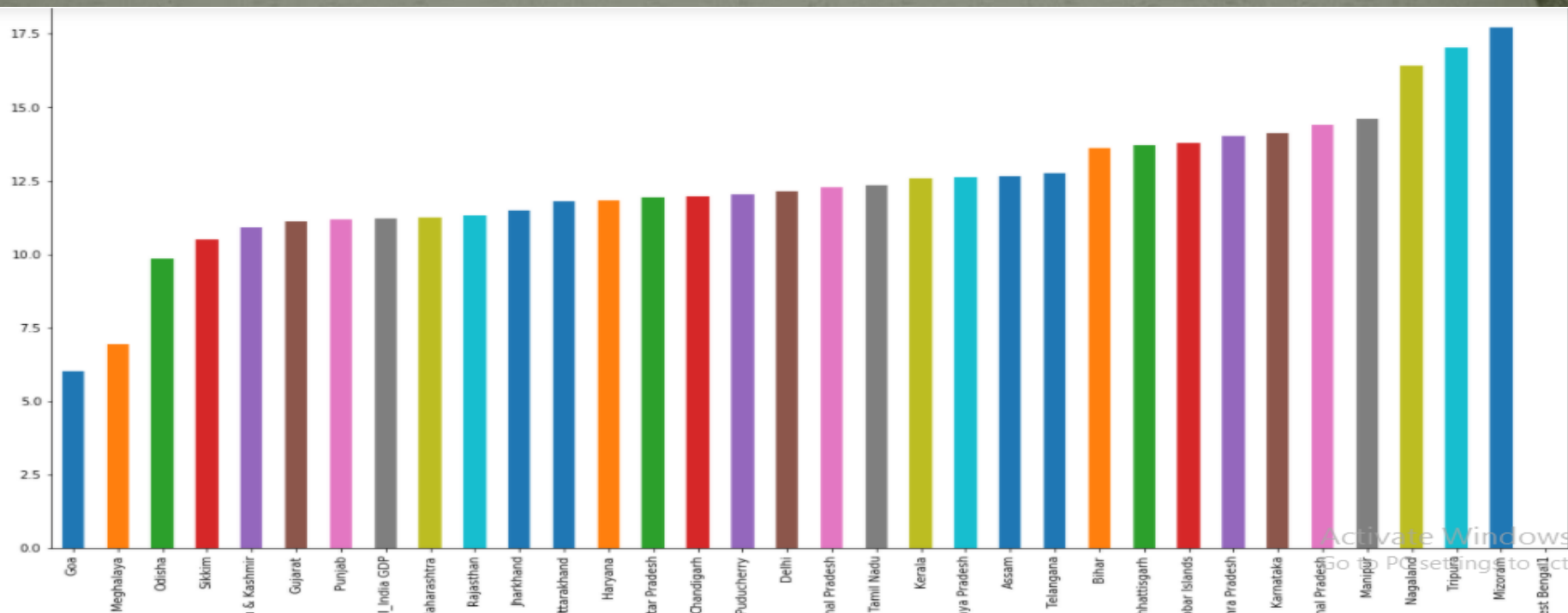
Data Exploration

- **Data I-A:** This dataset consists of the GSDP (Gross State Domestic Product) data for the states and union territories.
- **Data I-B:** This dataset contains the distribution of GSDP among three sectors:
 - 1) primary sector (agriculture)
 - 2) secondary sector (industry) and
 - 3) tertiary sector (services) along with taxes and subsidies.
- **Problem Statement** - Finding out the areas that will foster economic development for their respective states.
- Based on the problem statement, we should focus on GDP of the various states of India and suggest ways to improve it.

Part – I :
GDP Analysis of Indian States

Average GDP growth rate

- Plotted a bar chart for Average GDP growth rate.
- Rate of GDP Growth in North East states like Mizoram, Tripura and Nagaland is high.
- States like Goa, Meghalaya, Odisha, Sikkim and J&K is struggling with with GDP growth.
- All India GDP growth is not so relatively low.

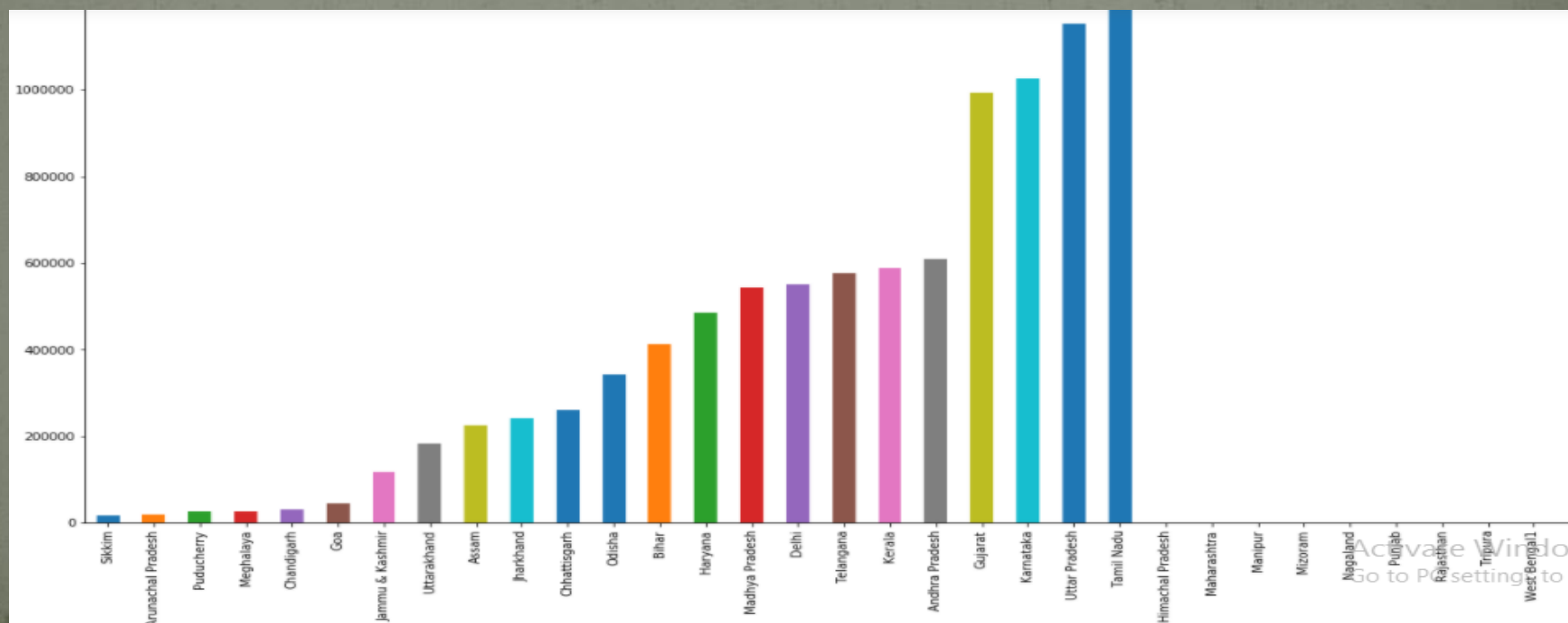


Total GDP of all the states for the year 2015-16

Top 5 states: Tamil Nadu, Uttar Pradesh, Karnataka, Gujarat and Andhra Pradesh

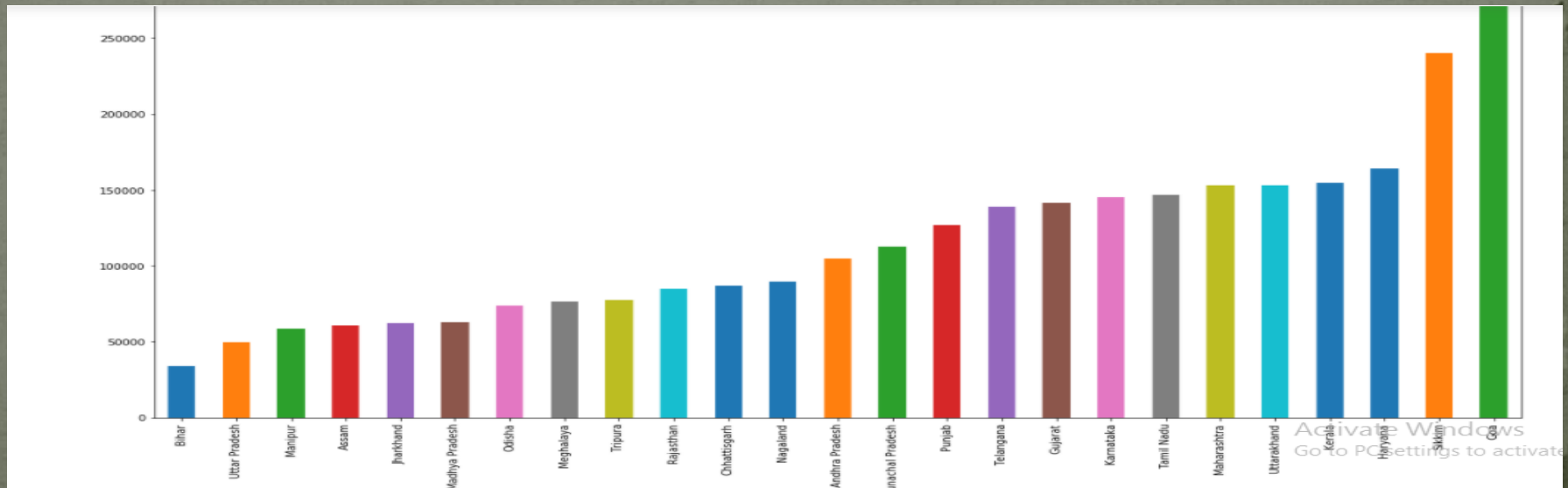
Bottom 5 states: Sikkim, Arunachal Pradesh, Puducherry, Meghalaya and Goa .

- GDP of Tamil Nadu, Uttar Pradesh, Karnataka and Gujarat are high.
- Whereas, GDP of Rajasthan, Andhra Pradesh, Kerela, Telangana and Madhya Pradesh are not that great inspite of that they are big states.
- The GDP of Haryana, Bihar, Punjab and Odisha are also low.
- The GDP of Chattisgarh, Jharkhand, Assam, Uttrakhand, J&K are extremely low as they are relatively big states in terms of land.



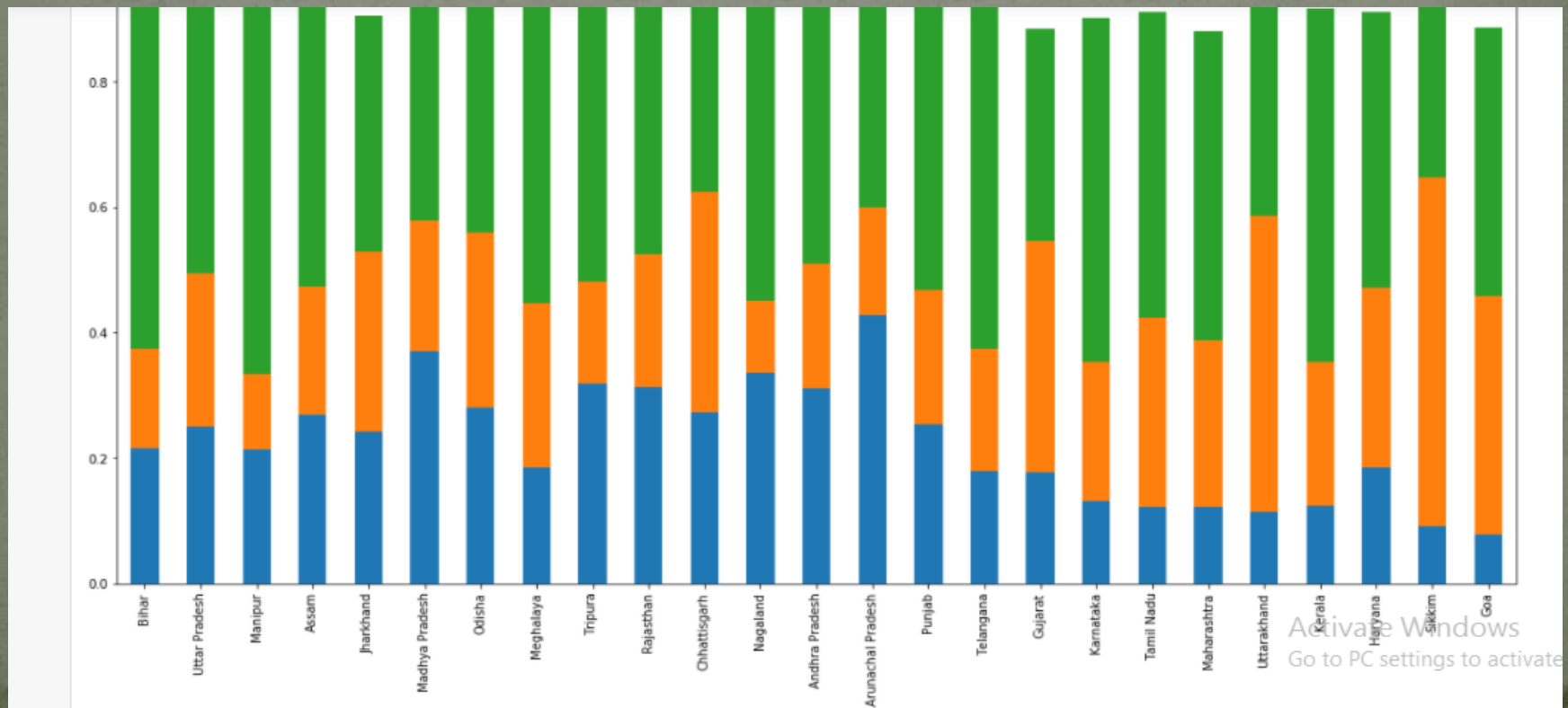
Plotting the per capita GSDP

- **Top-5 states:** Goa, Sikkim, Haryana, Kerala and Uttarakhand
- **Bottom-5 states :** Bihar , Uttar Pradesh, Manipur, Assam and Jharkhand.
- Goa, which has the lowest GDP growth rate has the second highest per capita GSDP.
- Big states like Uttrakhand, Tamil Nadu, Karnataka, Gujarat, Telangana and Punjab has decent per capita income and decent GDP.
- Big states like Andhra Pradesh, Chattisgarh, Rajasthan and Odisha has low per capita GSDP. Their GDP is also not that high.

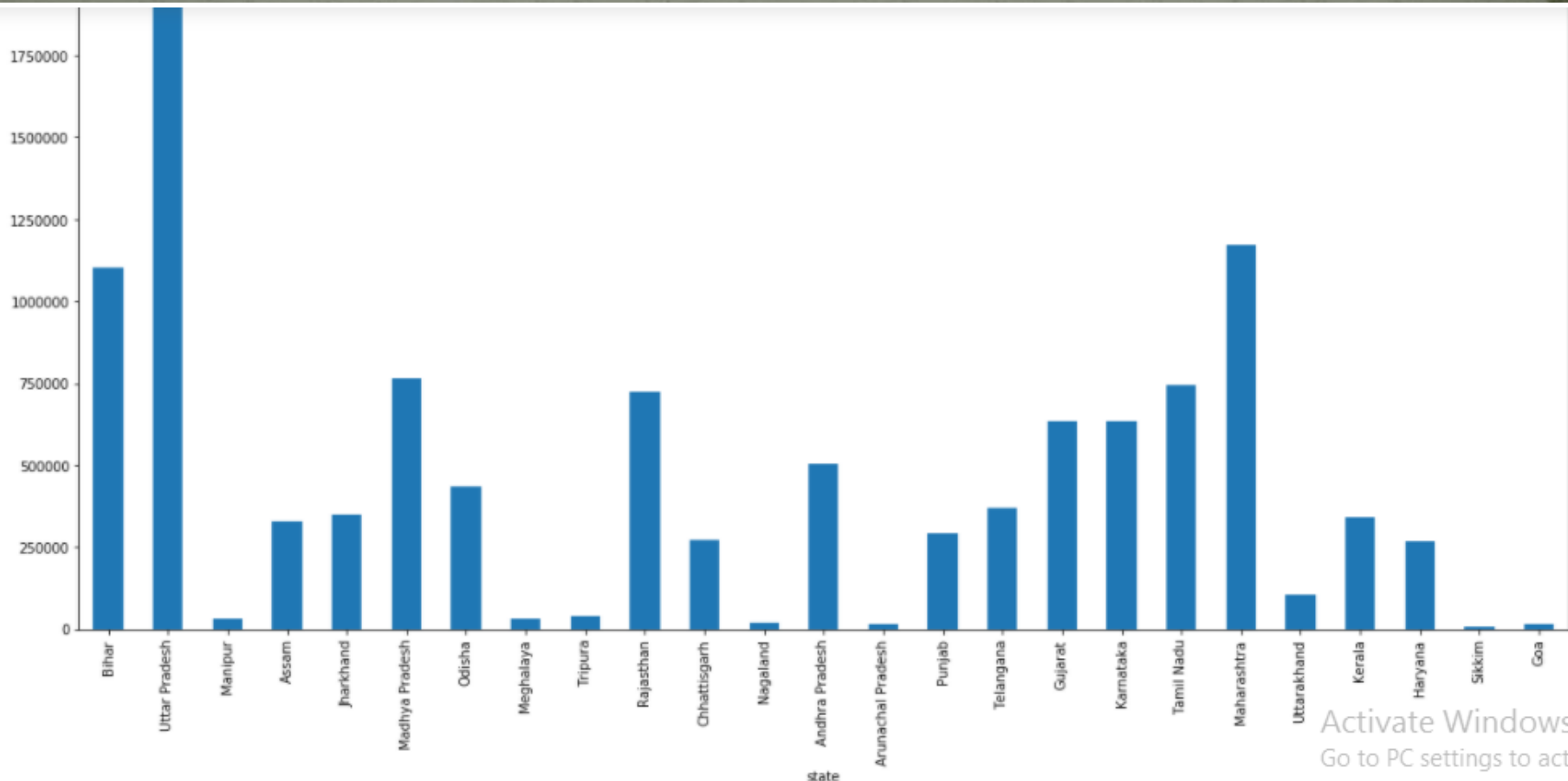


Finding the dependency of GDP on primary, secondary and tertiary.

- For states which has low per capita income, has significant dependence on primary source whereas states which have high per capita income relies more on secondary and tertiary.
- UP has high GDP but due to its population, has low per capita income.

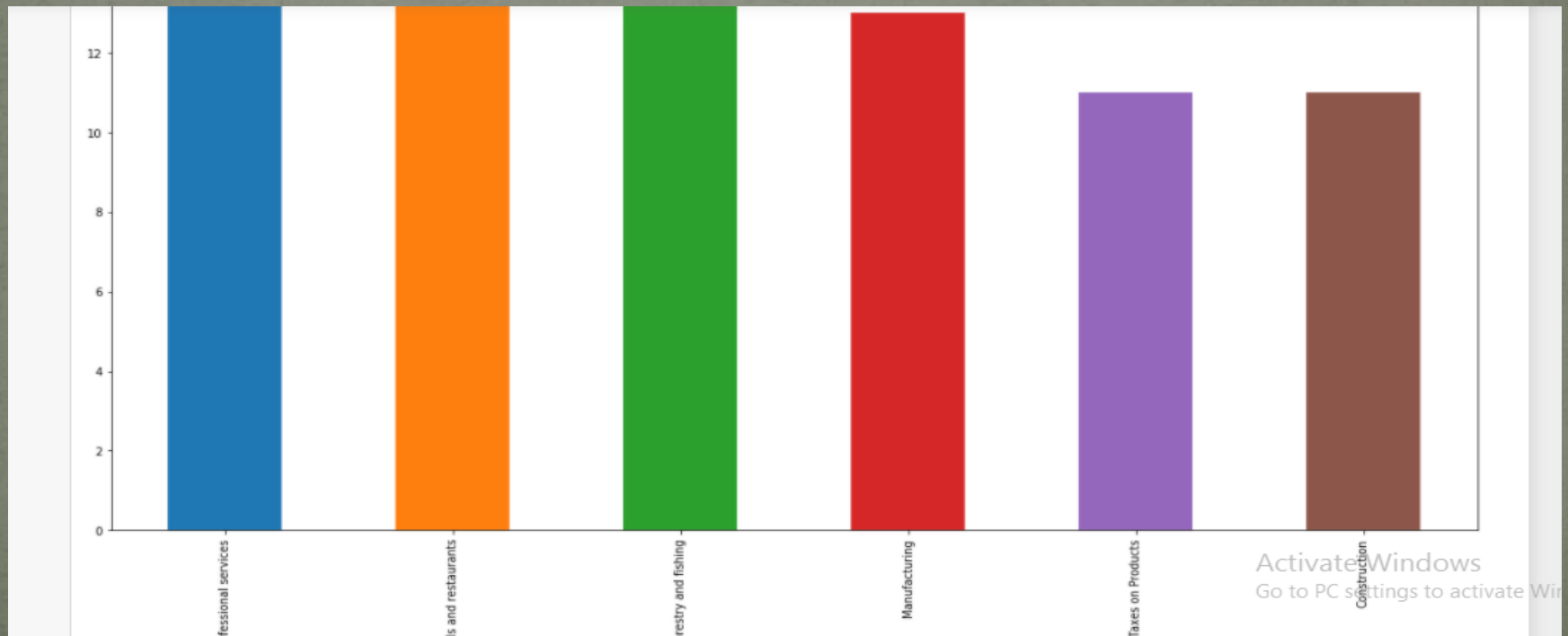


- Madhya Pradesh also has low per capita income, but mainly due to over dependence on primary source.
- Arunachal Pradesh has decent per capita income inspite of heavily dependence on primary source as its population is significantly low.
- States like Assam and Jharkhand go together with similar per capita income, GDP and dependence on primary, secondary and tertiary source.



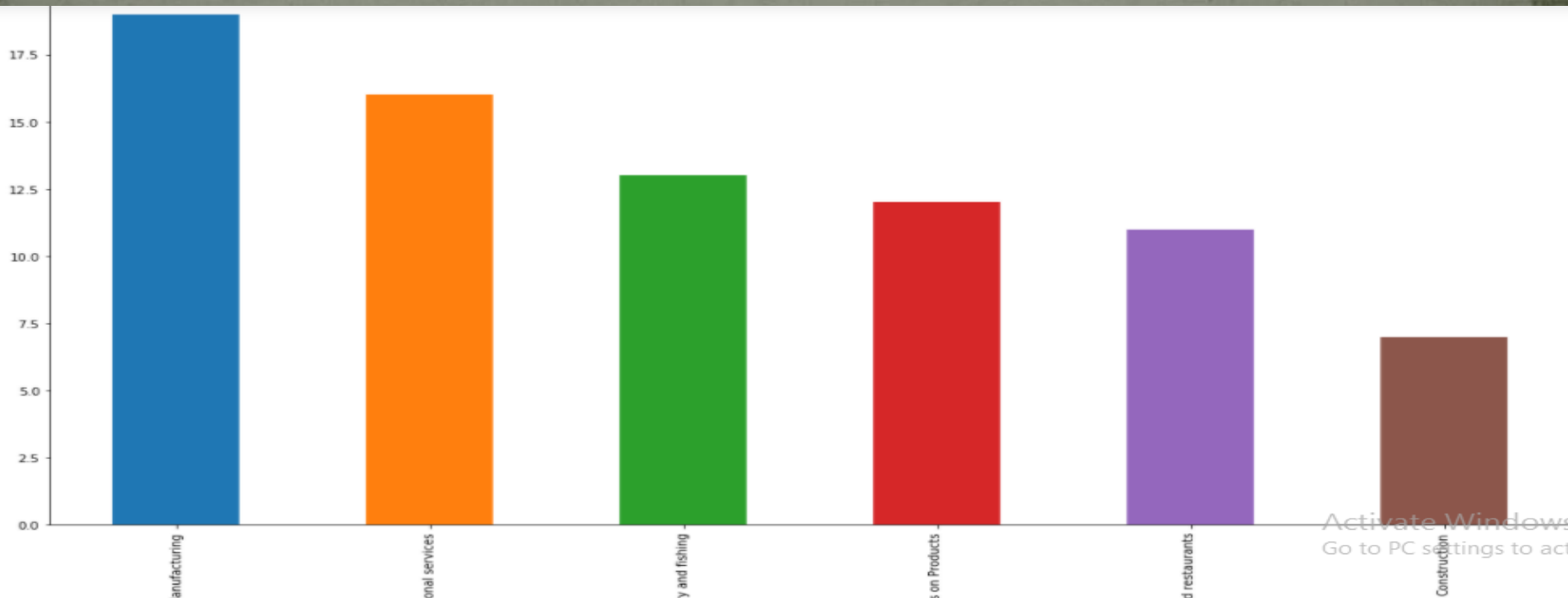
Category_1 States

- **States :** 'Goa', 'Sikkim', 'Kerala', 'Haryana'.
- There are only 4 states in this category, all of which are small (area wise) and have good industrial base, agricultural, trade and real state. For North-Eastern states, Sikkim can be a role model of development.
- Trade and hospitality bussiness should be promoted further.
- Manufacturing should be further promoted.



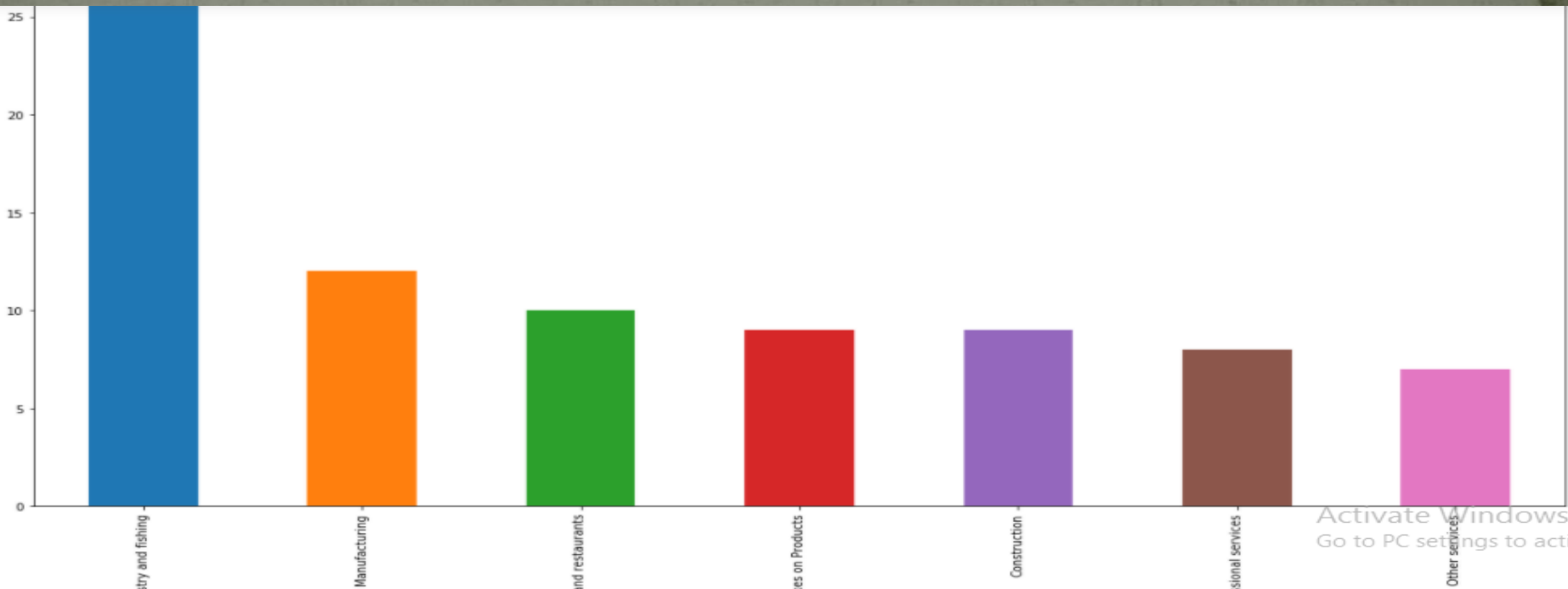
Category_2 States

- **States** :Arunachal Pradesh', 'Punjab','Telangana', 'Gujarat', 'Karnataka', 'Tamil Nadu','Maharashtra', 'Uttarakhand'
- States like Karnataka, Tamil Nadu, Gujarat and Maharashtra, which has huge costal area can set up ports. Costal area can help in harness clean energy and fisheries can be increased. Similary, tourism industy should also be encouraged.



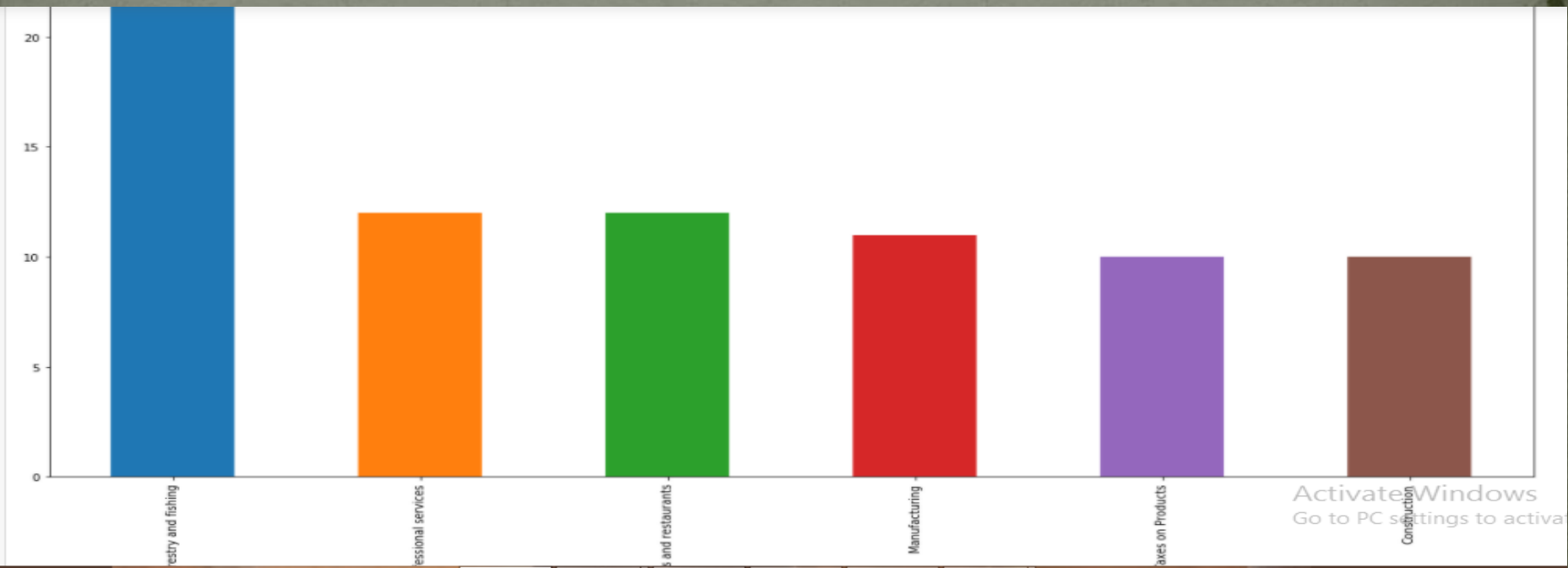
Category_3 States

- **States :** Madhya Pradesh', 'Odisha', 'Meghalaya', 'Tripura', 'Rajasthan', 'Chhattisgarh', 'Nagaland', 'Andhra Pradesh'
- These states are mostly dependent on agriculture and have less number of industries. More programs for educating the youth and promoted which can lead to further development of industries.
- For states like Andhra Pradesh and Odissa, ports should be developed for the transport of goods which will create new source of employment and also will increase the trade for produced goods.



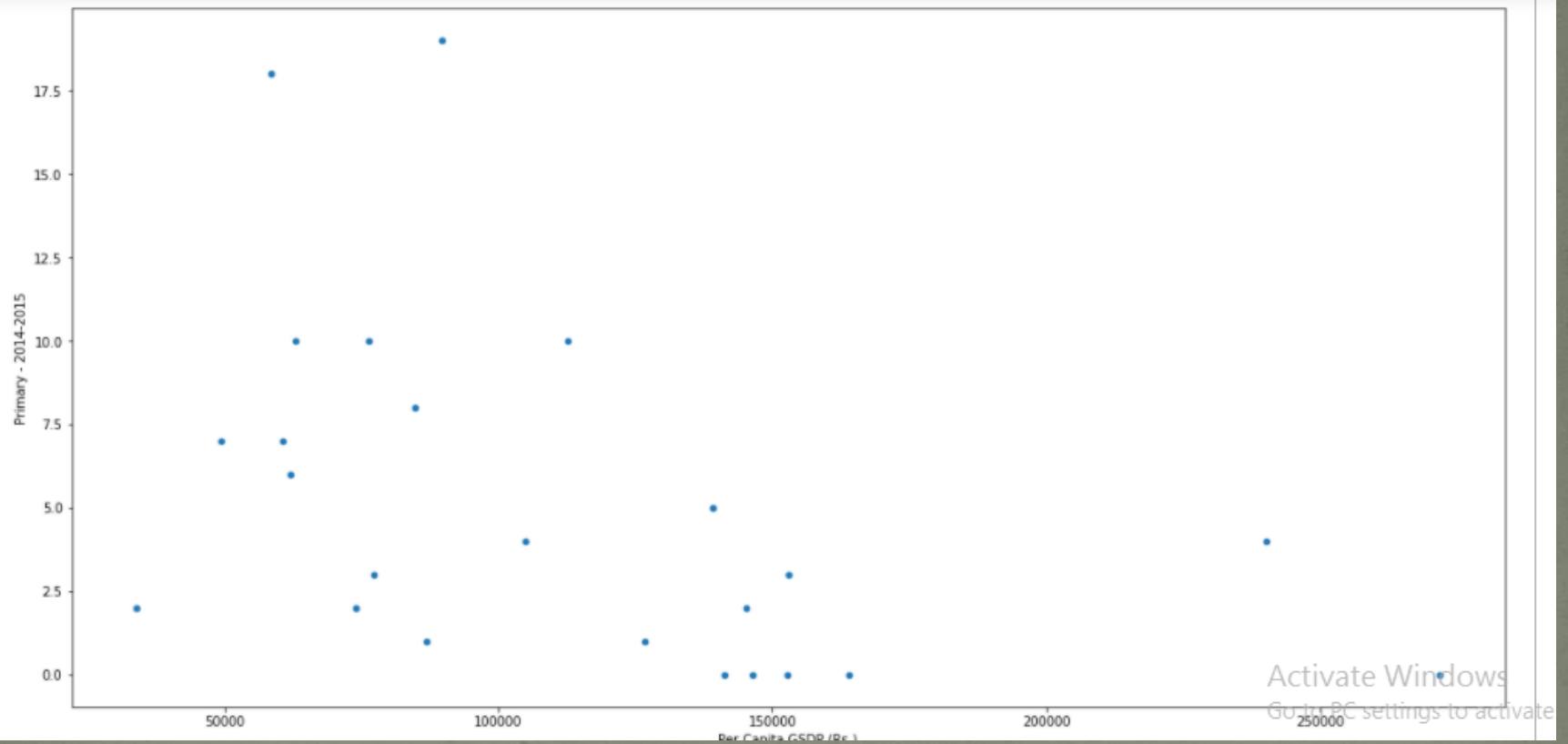
Category_4 States

- **States :** Bihar', 'Uttar Pradesh', 'Manipur' 'Assam', 'Jharkhand'.
- Most of the population in these are dependent on agriculture and manufacturing lies at the 6th category. Since the economy is dependent on agriculture, recommendation are:
- Increase the productivity of the crops by being less dependent on rainfall and more on water sources like canal or underground water. Also, better infrastructure must be developed to preserve the agricultural products for long duration of time..
- States like Bihar, Uttar Pradesh, Assam have rivers like Ganga, Yamuna, Narmada and Brahmaputra which can be used for cheaper water transport.

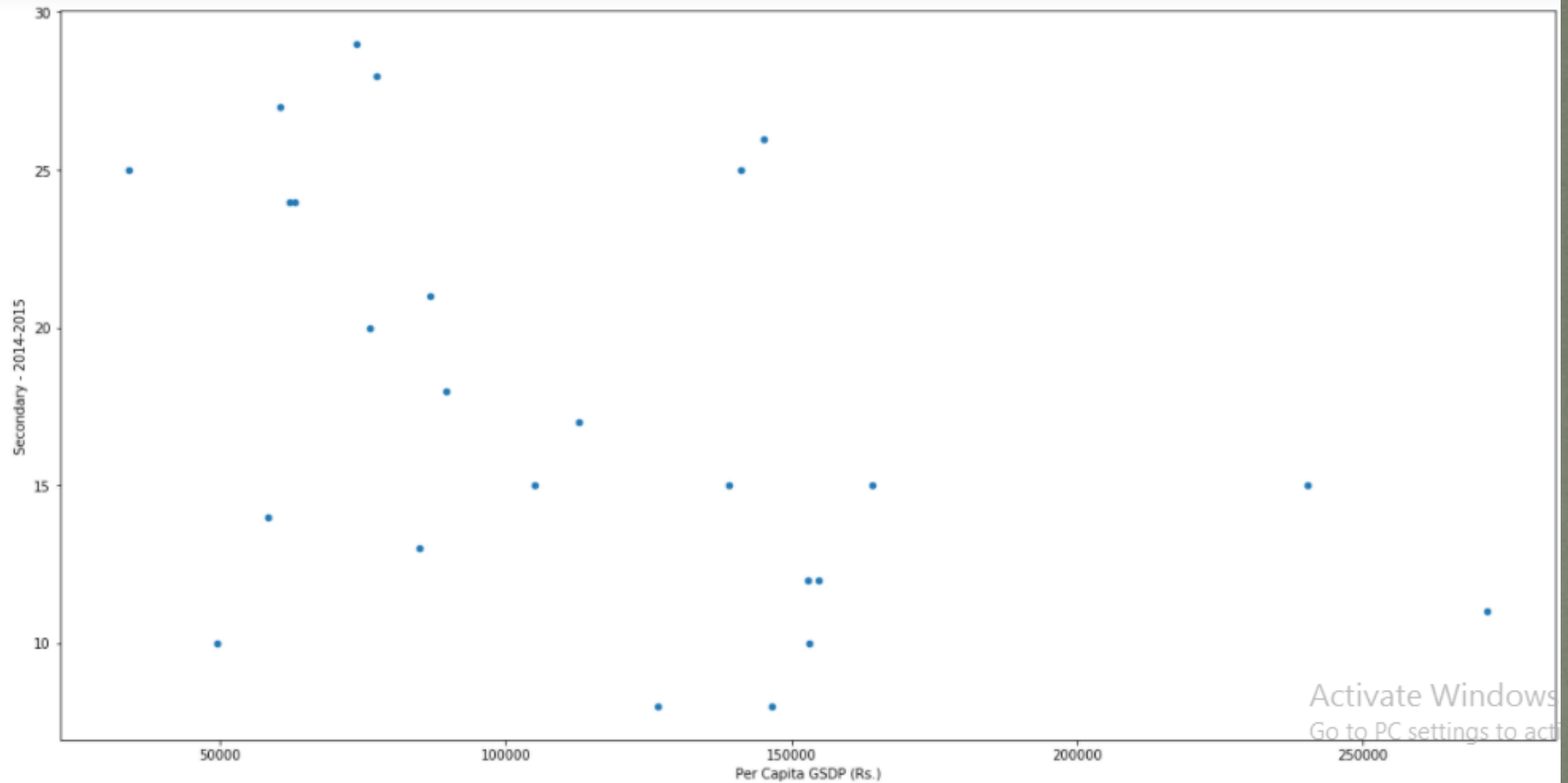


Part – II
GDP and Education Dropout Rates

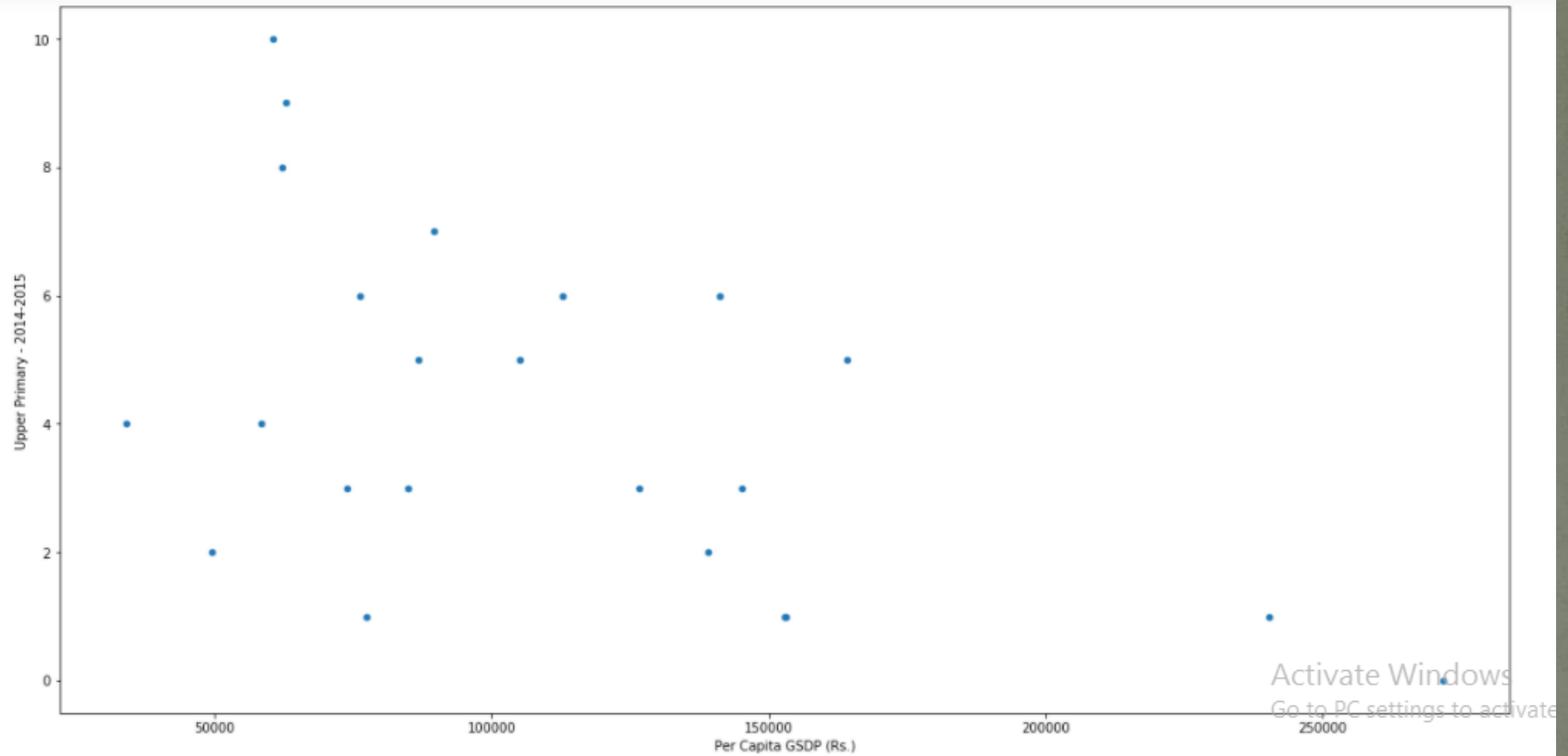
Drop-out trend: 'Primary - 2014-2015'



Drop-out trend: 'Upper Primary - 2014-2015'



Drop-out trend: 'Secondary - 2014-2015'



Inferences

- For all the 3 categories(primary, upper primary and secondary), it can be observed that there is almost linear relationship between drop-out rate and per capita GSDP.
- As per-capita GSDP increases, drop-out rate decreases.
- From the analysis in Part I-B, it is observed that low per-capita points to more dependence on agriculture and lack of industries.
- So, it is possible that, in the states where people are not educated, industries do not get set-up as they require skilled labour.
- It is also possible that people are educated upto some extend, but because of lack of opportunity, they are not willing to go for higher education.
- More money should be spend on quality education