

Analysis of countries that require Humanitarian Aid

Objective

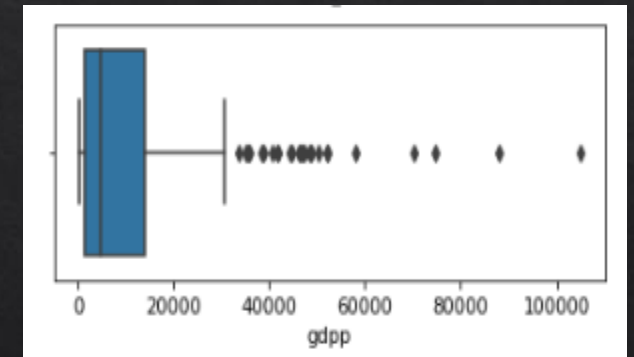
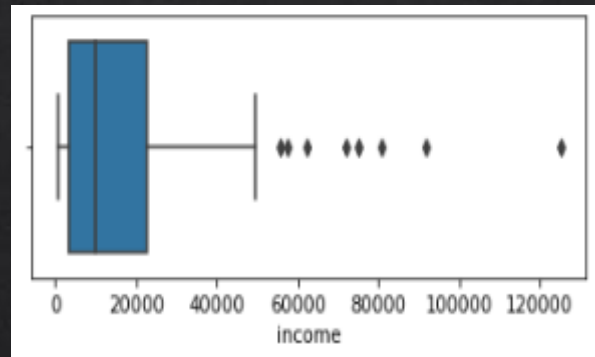
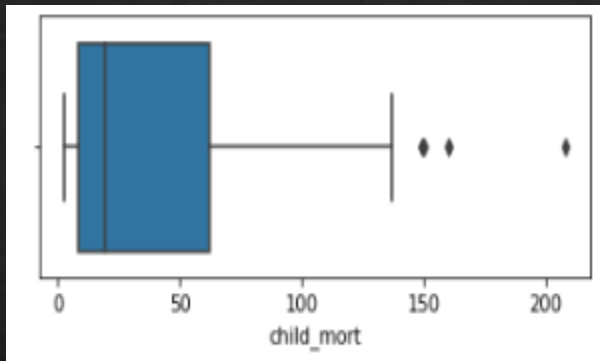
To categorize the countries using some socio-economic and health factors that determine the overall development of the country and decide the countries which require aid.

Analysis Approach

- ◆ Identifying the main factors to categorize the countries based on their development level.
- ◆ Analysing the distribution of main factors.
- ◆ Performing necessary data Pre-processing.
- ◆ Divide countries into different clusters to identify countries that require aid.
- ◆ Select countries from the cluster that are in dire need of aid.

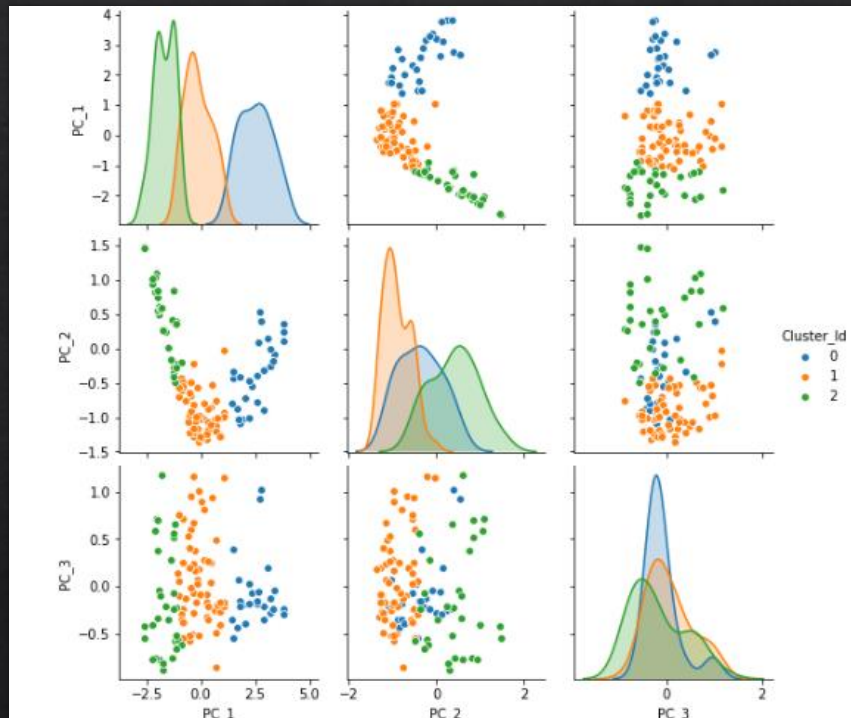
Analysing Distribution of important factors

From the business understanding we have learnt that Child Mortality, Income, GDP are some important factors which decides the development of any country.

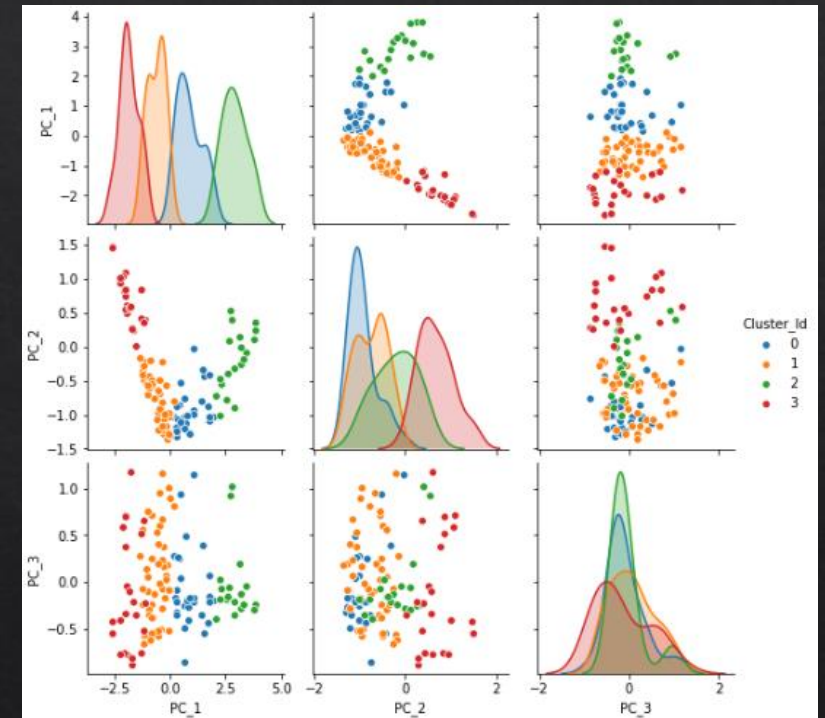


Analysing Clusters

Clusters formed on fitting K-Means clustering model after performing Principal Component Analysis on data.



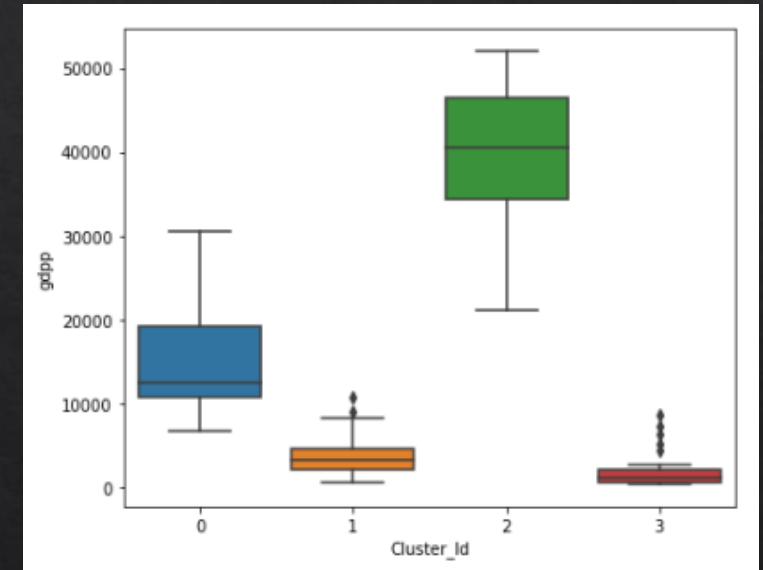
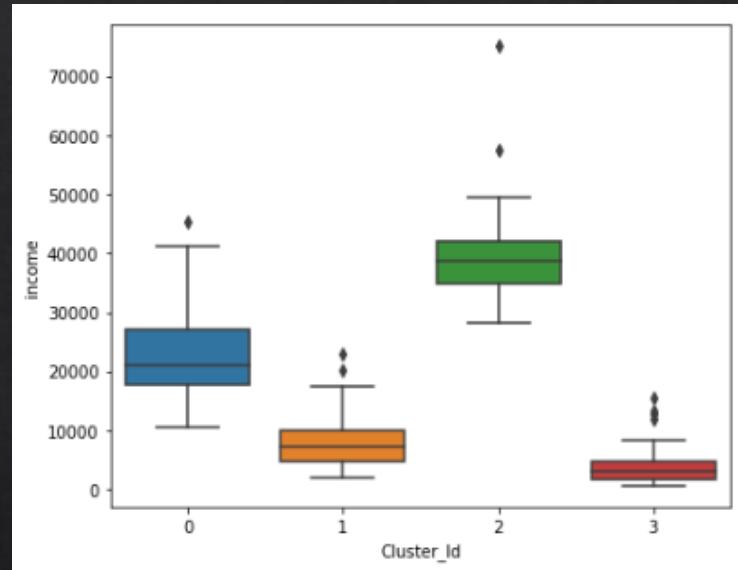
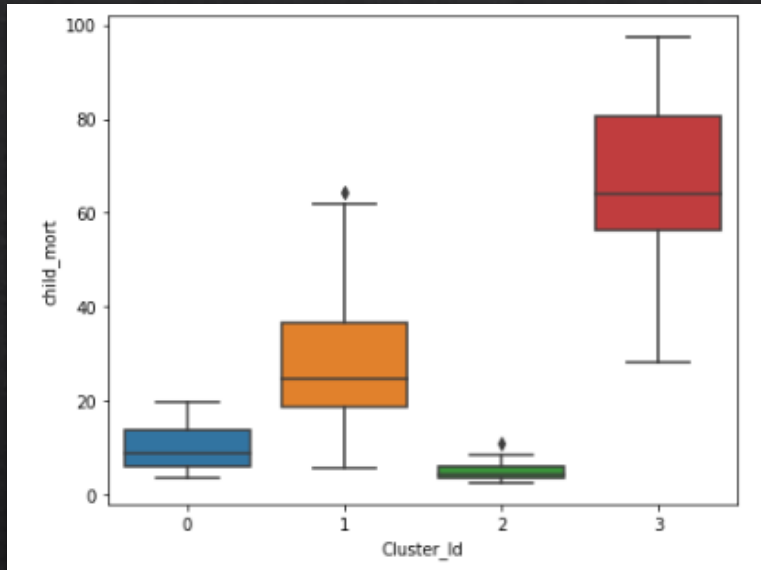
3 cluster model



4 cluster model

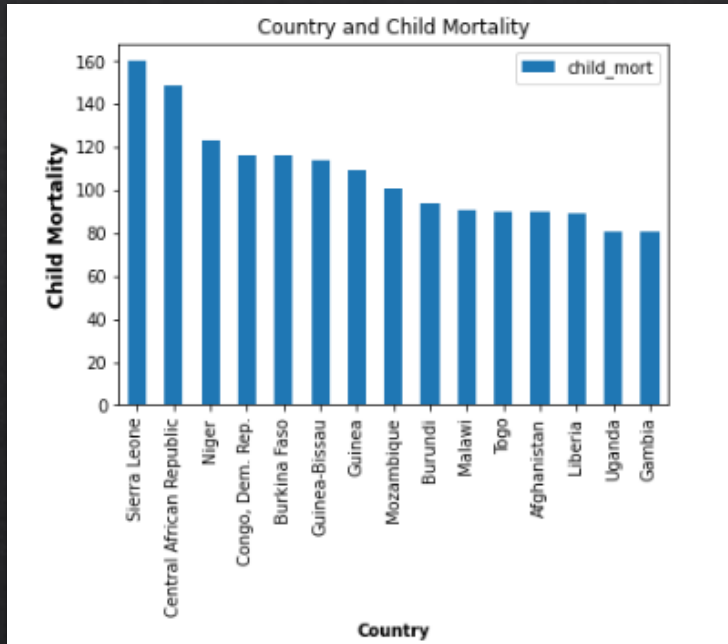
Model with 3 clusters has more intra cluster distance compared to model with 4 clusters. Hence, we choose model with 4 clusters.

Analysing Clusters

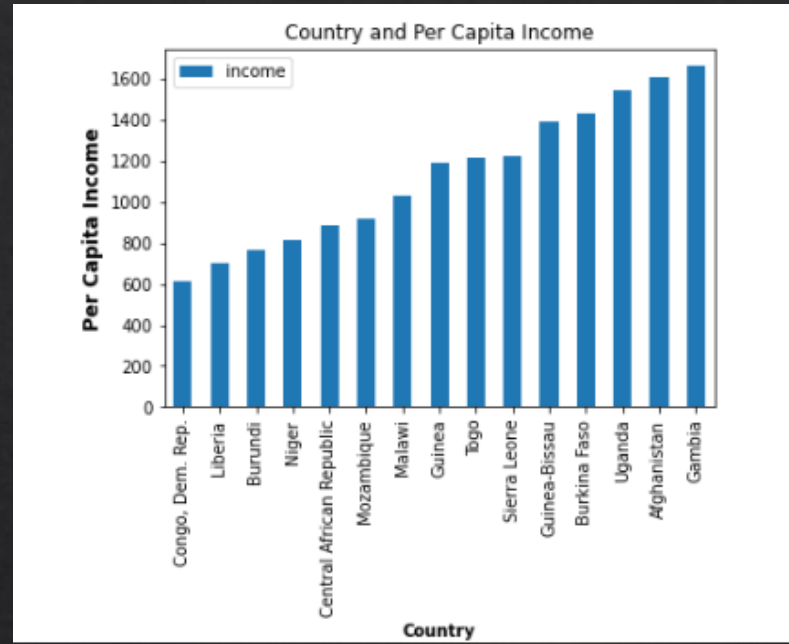


Cluster 3 has highest mean for child mortality, lowest mean for Income and lowest mean for GDP among 4 clusters. Hence, countries in cluster 3 are in dire need of aid.

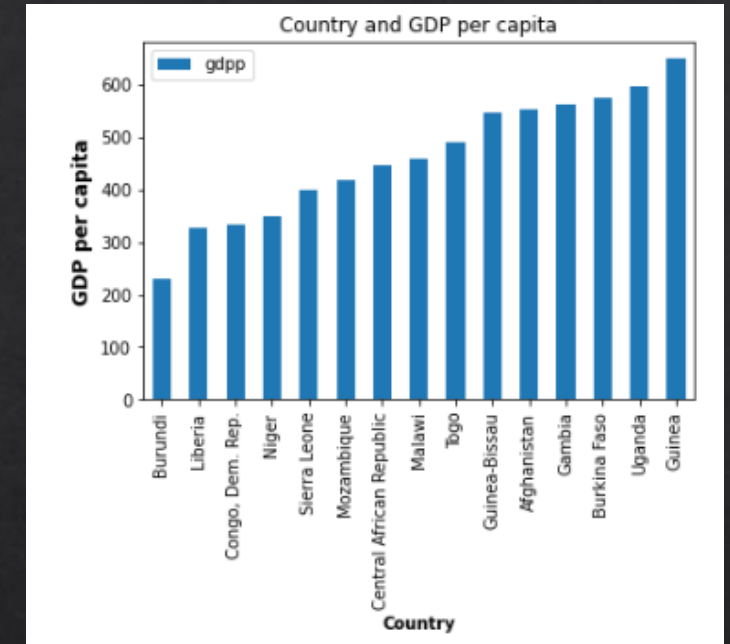
Conclusion



- Afghanistan
- Burkina Faso
- Burundi
- Central African Republic
- Congo, Dem. Rep.



- Gambia
- Guinea
- Guinea-Bissau
- Liberia
- Malawi



- Mozambique
- Niger
- Sierra Leone
- Togo
- Uganda

The above 15 countries are in dire need of aid. A shorter list can be generated from the observations of above histograms.