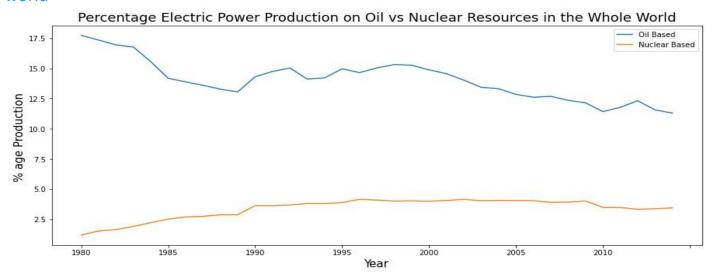
Report: Assignment 01 Name: Muhammad Ali

Applied Data Science ID: 21069608

Analysis of worldwide electric power generation on oil and nuclear sources

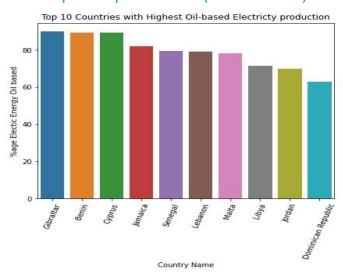
Different types of analysis are carried out in each section on the available data. Data source file is taken from world data bank. Data is manipulated in the python program for obtaining various kind of information and presentation in graphs.

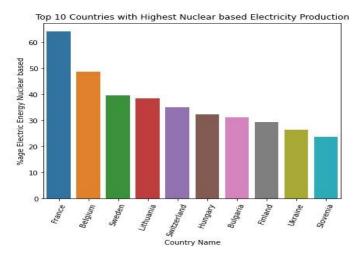
Plot 1: Average percent electricity production from oil and nuclear source in the whole world



This plot shows the percent oils and nuclear based production of the total electric power in the whole world from 1980 to 2015. From the above plot we can clearly obtain the information that there was a higher percentage of oil-based electricity which was almost 18% of the total production in 1980 and the nuclear based electricity was low which was almost 1% of the total production. As the time moves the ratio of oil-based of electric power production is significantly decreased. At the end of the year 2015 this is decreased to 10 percent of the total electricity production. While the nuclear based power production is increased very slowly to almost 3% of the total production by 2015.

Plot 2. Top 10 countries having highest dependency on oil resources vs nuclear resources for electric power production (1980 – 2015)

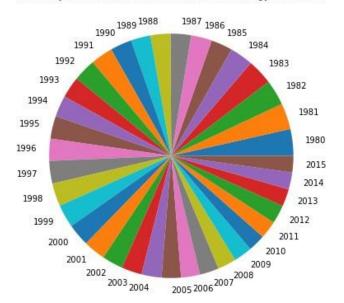




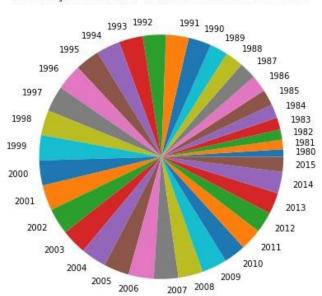
These plots are for the top 10 countries with highest oil and nuclear energy consumption rates for their electricity production from 1980 to 2015. We can see that Gibraltar, Benin and Cyprus are the top three countries where the oil consumption rate for production of electric power is more than 85% and we can also observe that France, Belgium, and Sweden have highest rates of nuclear energy production which almost 65%, 49% and 40% respectively over the period.

Plot 3. Comparative analysis of electric power production per year from oil and nuclear sources (whole world 1980 - 2015)





Electricity Production Per Year From Oil Sources 1980-2015



Both pie plots start from the middle of the right side from 1980 and ends in 2015. The plot at the left shows the average consumption rate of oil to produce electric power for all countries for the duration 1980 to 2015. While plot at the right shows the average production of electric power from nuclear energy for all countries for the same period. From these graphs we can deduce that oil-based production of electricity is gradually reduced, and the nuclear based electric power generation is increased over the period.