

The Battle of Neighborhoods

Capstone Project

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Introduction & Business Problem

Background:

Germany constitutes of 16 federal states. Each state has its own constitution. Germany has a social market economy with a highly skilled labour force and has the largest national economy in Europe which is also the world's fourth largest by nominal GDP. Germany is part of the European single market which represents more than 450 million consumers.

Problem:

The limitation of GDP as a measure of a country's quality of life or well-being of the society has been a subject of considerable debate over. We will observe how the GDP has an effect on the Human Development Index.

Historically, a 1 percent decrease in GDP has been associated with a slightly less than 2-percentage-point increase in the unemployment rate. The observation that GDP growth changes the unemployment rate will be studied in this project.

Data

Data Acquisition:

The Data required to study in this project is taken from the Wikipedia pages of information of the topic.

This Data includes the information of Germany for unemployment, GDP, HDI with respect to state.

<https://en.wikipedia.org/wiki/Germany#Politics>
https://en.wikipedia.org/wiki/States_of_Germany#List
https://en.wikipedia.org/wiki/ISO_3166-2:DE#Current_codes
https://en.wikipedia.org/wiki/List_of_German_states_by_population_density
https://en.wikipedia.org/wiki/Economy_of_Germany#German_states
https://en.wikipedia.org/wiki/List_of_German_states_by_Human_Development_Index
https://en.wikipedia.org/wiki/List_of_German_states_by_unemployment_rate

Data Cleaning:

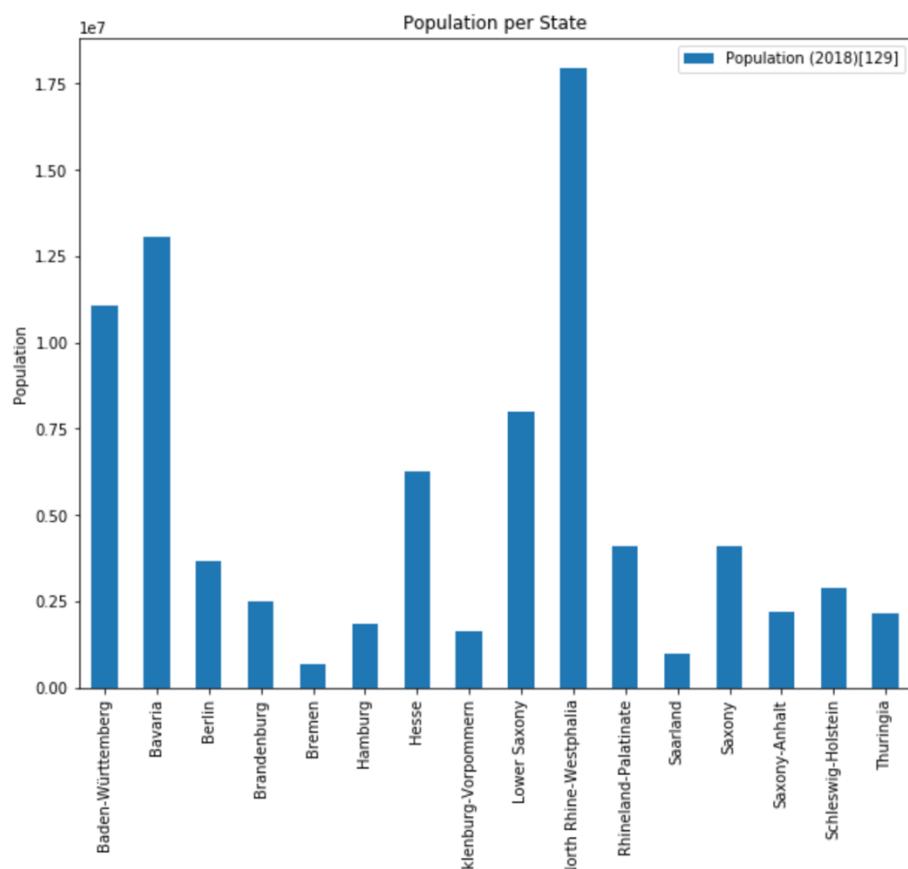
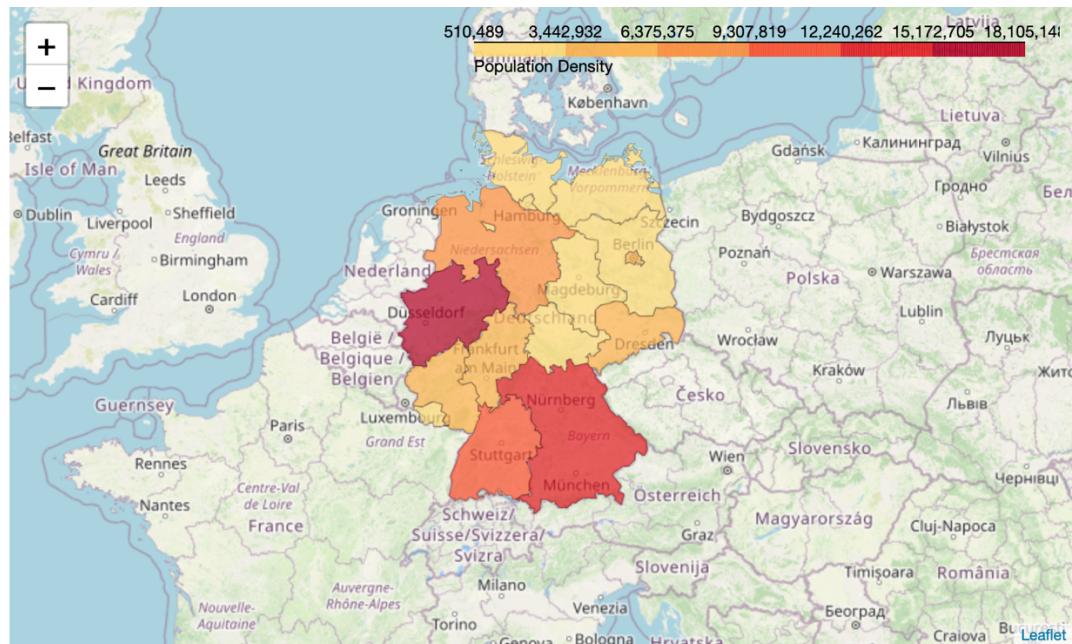
Data is captured from multiple source pages. There are multiple tables available to be combined into one which can be utilised for our analysis. While combining we also need to make sure to remove the columns which are not relevant for our analysis.

After the capturing and cleaning the data to form a single table including all the information state wise for Germany, we can go ahead and starting working with exploratory data analysis.

Exploratory Data Analysis

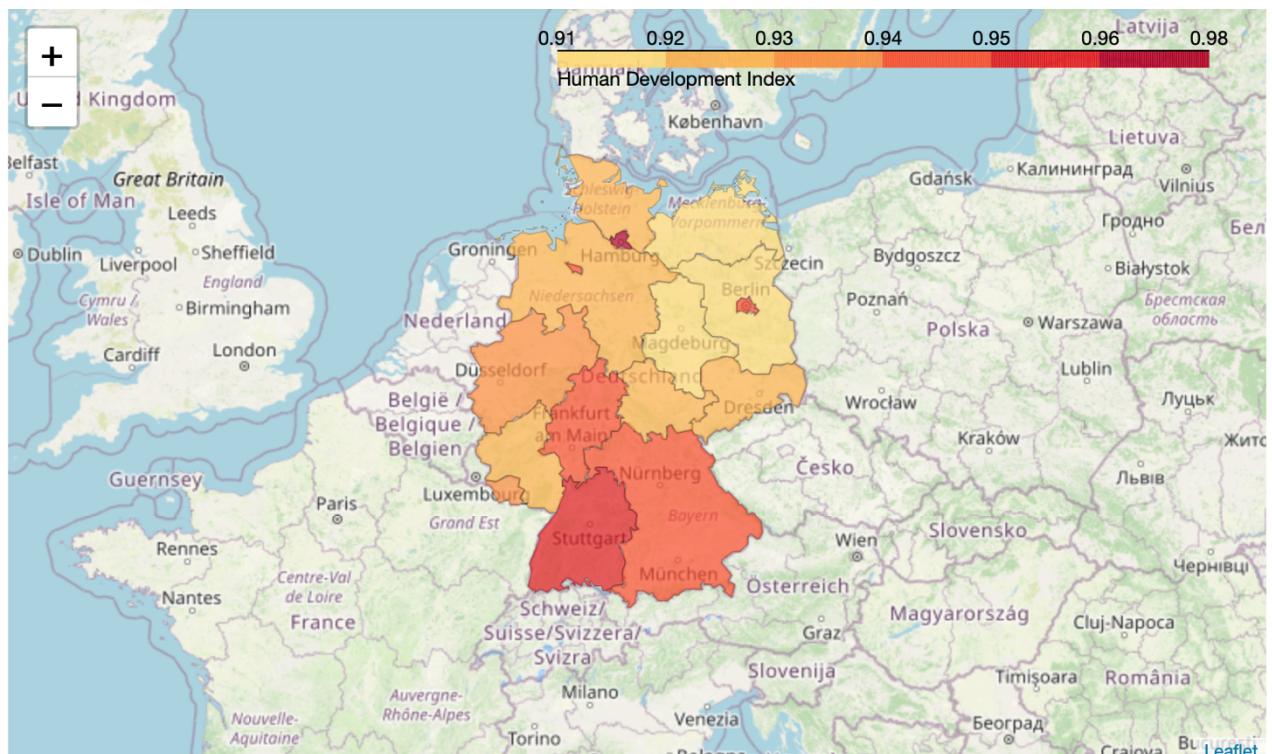
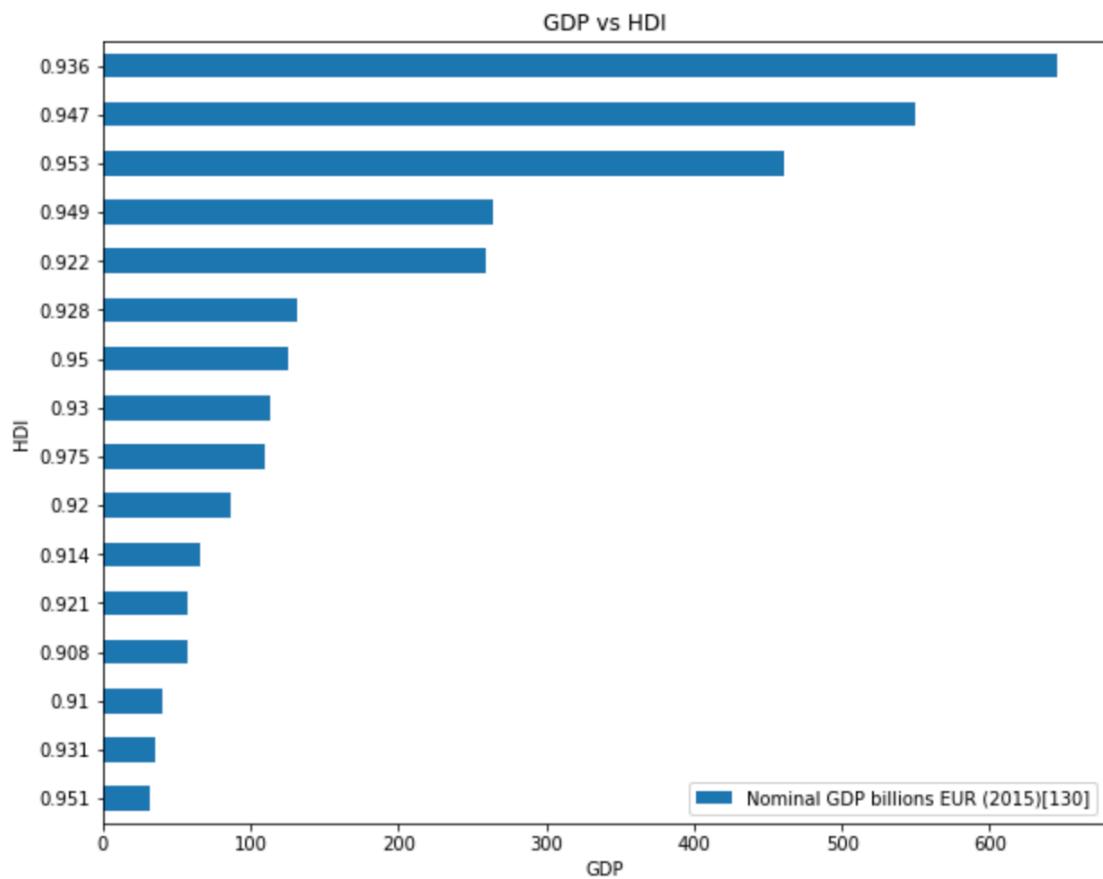
Population of Germany:

The following depicts the population of each state in Germany



GDP vs HDI:

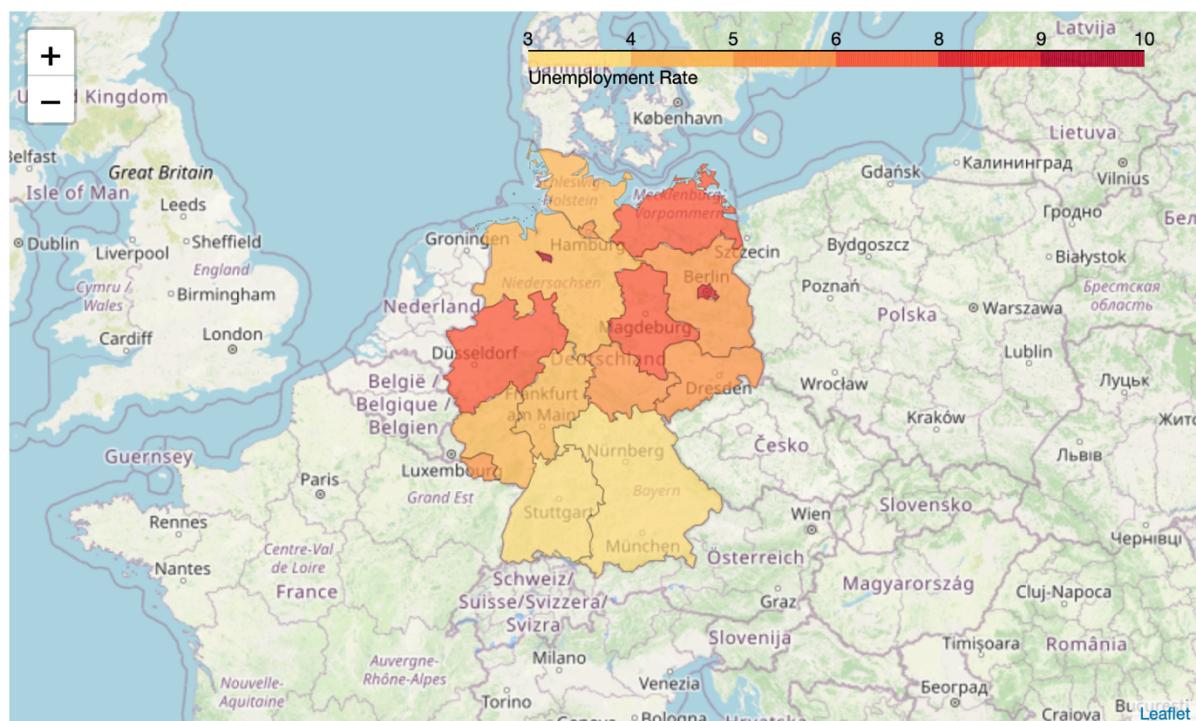
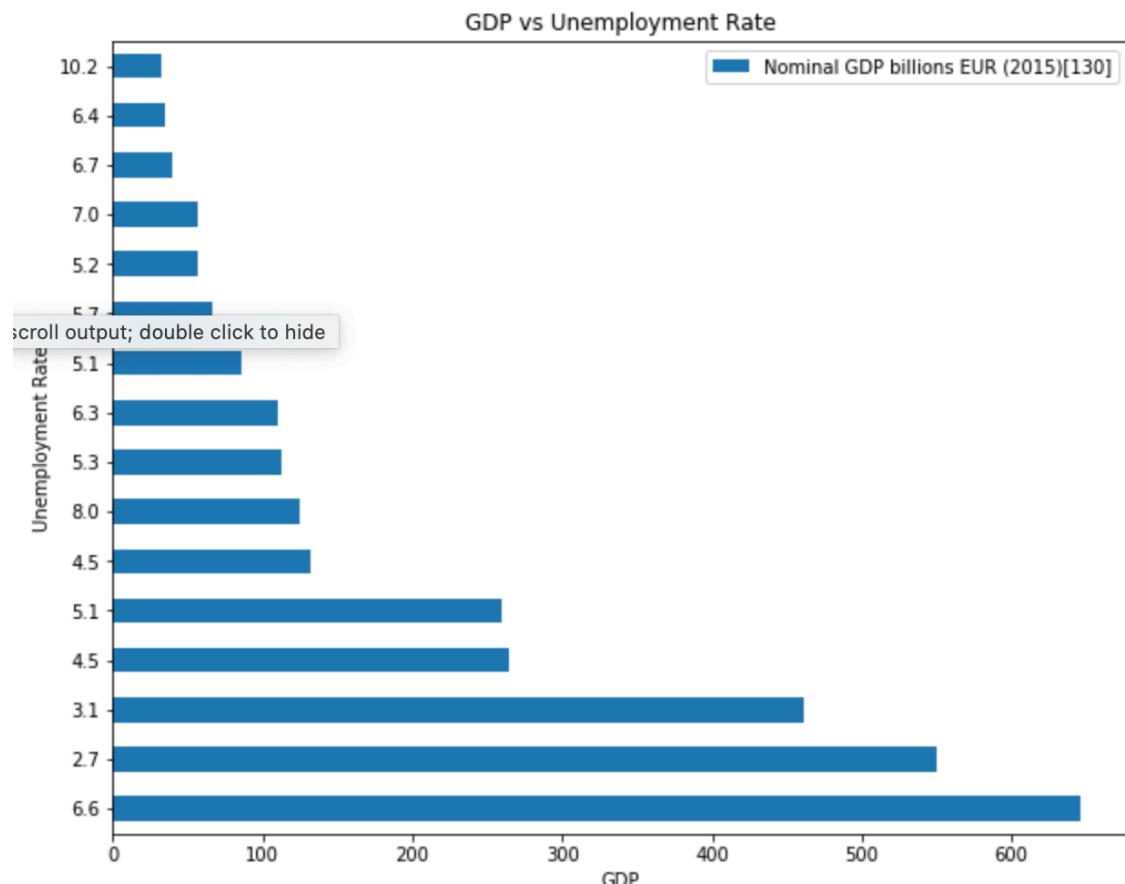
Studies show that when the GDP increases there will be a growth in the human development index.



GDP vs Unemployment Rate:

When the GDP increases, the employment rate increases.

This means that the Unemployment rate decreases when the GDP increases.



Conclusion

Data Acquisition:

The Data required to study in this project is taken from the Wikipedia pages of information of the topic.

In this study, we can analyse the Demographic and Economic effects as well as the Human Development with respect to these factors