Life Expectancy And GDP

Intro

In this project, I explored the life expectancy and GDP data of six different countries (China, Chile, Germany, Mexico, United States of America and Zimbabwe)

Goal

My goal is to determine how a Country's GDP affects the life expectancy of an individual and to also understand the relationship between a Country's GDP and life expectancy over time.

Data

Data was obtained from Codecademy platform (Data Scientist pathway)

Analysis

Analysis would be done using Matplotlib, NumPy, Pandas and Seaborn

- Statistical Analysis would be done using Pandas and NumPy
- Visual Analysis would be done using Matplotlib and Seaborn.

Method

1. I loaded and observed the columns and first few rows.
2. Performed basic summary statistics.
3. I asked various questions and attempted to answer them.
4. I plotted figures to help in answering some of my questions

Discussion

1. What is the average life expectancy for each country?
   The average LE for each country is displayed below, with Zimbabwe having the lowest LE and Chile Germany having the highest.

```
Country
Chile                       78.94375
China                       74.26250
Germany                     79.65625
Mexico                      75.71875
United States of America    78.06250
Zimbabwe                    50.09375
```

2. What is the average GDP for each country?
   The average GDP for each country is displayed below, with USA having the highest and Zimbabwe having the lowest GDP.

```
Country
Chile                        1.697888e+11
China                        4.957714e+12
Germany                      3.094776e+12
Mexico                       9.766506e+11
United States of America     1.407500e+13
Zimbabwe                     9.062580e+09
```
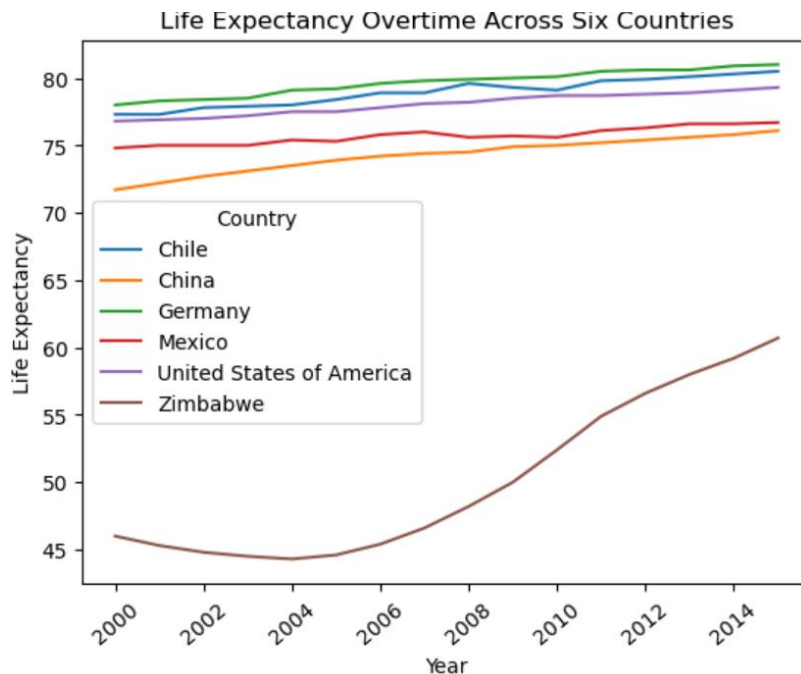
3. Has GDP increased over time?
   From the plot, we can see that GDP has increased over time for most countries.
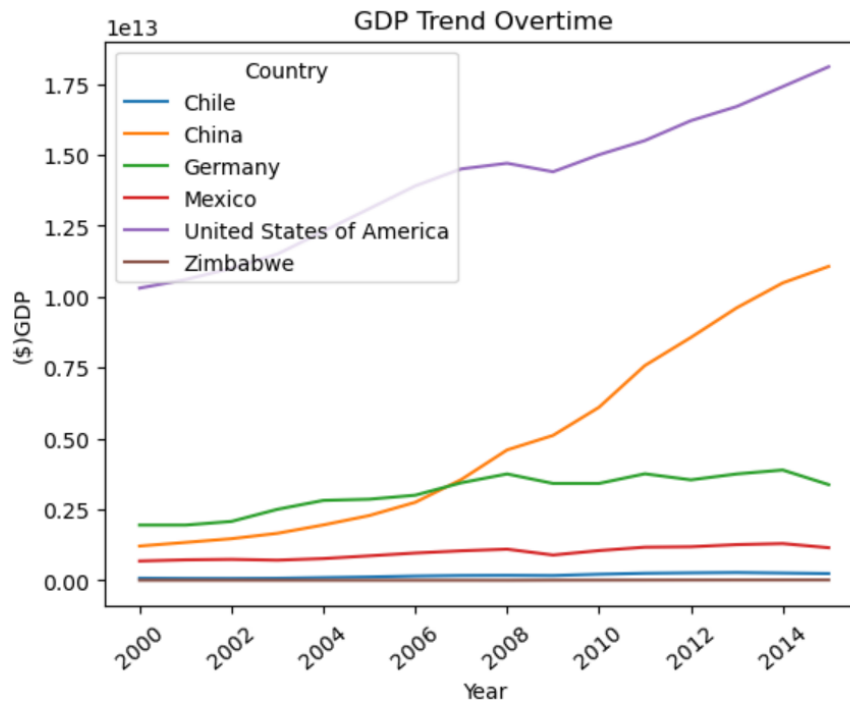

4. Has life expectancy increased over time?
   From the plot below, we can see that life expectancy has increased over time for all countries with Zimbabwe showing the largest increase

Life Expectancy Overtime Across Six Countries

5. What is the relationship between life expectancy and a country's GDP?
    From the plot below, we can see that there is a positive relationship between life expectancy and GDP. This was noticeable across all countries except Zimbabwe whose GDP was approximately constant.
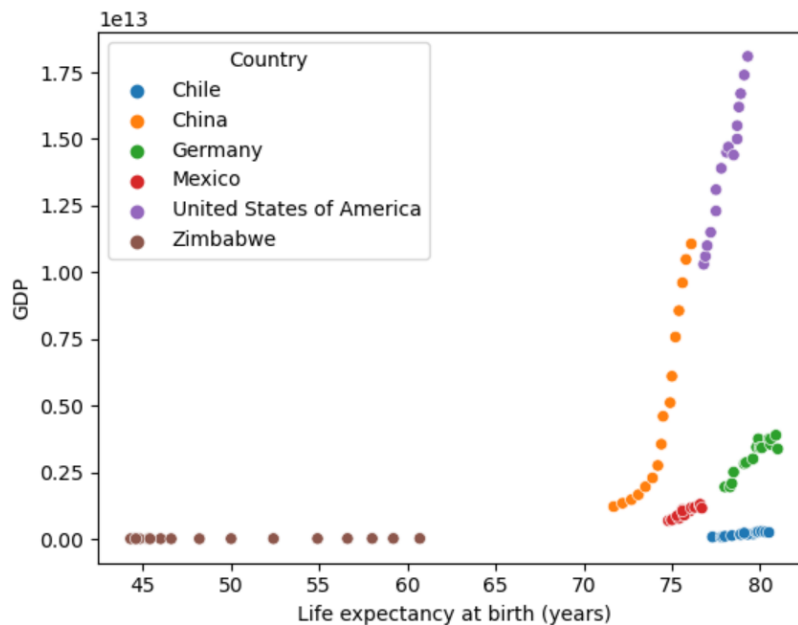
Conclusion

After performing my analysis of this data, it can be concluded that an increase in GDP of a country can positively impact the lives of its citizen. Also, as a nation develops, the life expectancy of individuals in that nation increase to. There was no significant testing done to see

if how much of an impact a country's GDP has on the life expectancy of individuals in that country.