

Analysis of GDP vs Life Expectancy

Gross Domestic Product (GDP) represents the total monetary value of all goods and services produced within a country, often used as a measure of a nation's overall wealth and economic health. It is commonly assumed that countries with higher GDP also tend to have higher life expectancies. This assumption stems from the belief that wealthier countries, with greater access to advanced medical technology and healthcare resources, are better equipped to preserve and extend the lives of their residents.

This research aimed to evaluate the validity of this hypothesis: whether higher GDP correlates with higher life expectancy. The study analyzed data on GDP and life expectancy from six countries over the period 2000 to 2015. For the purpose of this research, life expectancy was defined as the average number of years a newborn is expected to live, while GDP was measured in US dollars. The findings of the analysis are summarized in the two figures presented below.

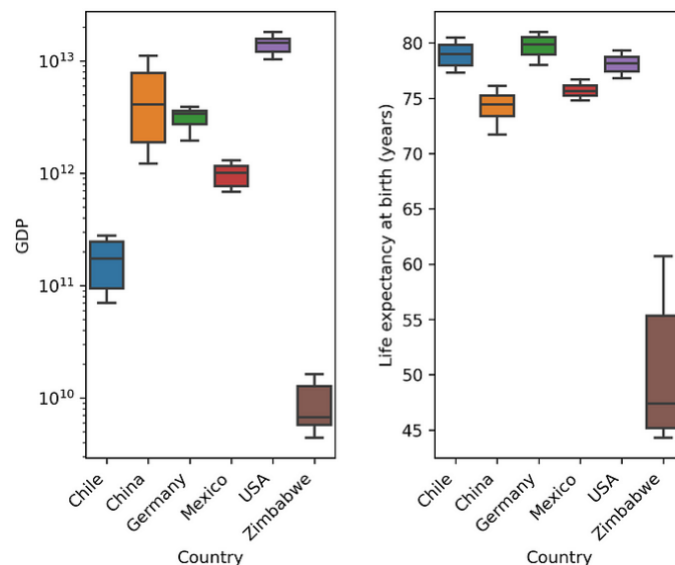


Figure 1. The graph on the left shows the range of GDP for each country from 2000–2015. The graph on the right shows the range of life expectancy for each country from 2000–2015.

The results from the graph indicate that China, Germany, and Mexico had comparable GDPs from 2000 to 2015. The United States had the highest GDP during this period, while Chile had the second lowest, and Zimbabwe consistently recorded the lowest GDP. The graph on the right reveals that Chile, China, Germany, Mexico, and the United States all exhibited similar life expectancies, whereas Zimbabwe had a significantly lower life expectancy. From this analysis, it can be concluded that GDP does not have a substantial impact on life expectancy, except in cases where a country has an exceptionally low GDP, as observed in Zimbabwe.

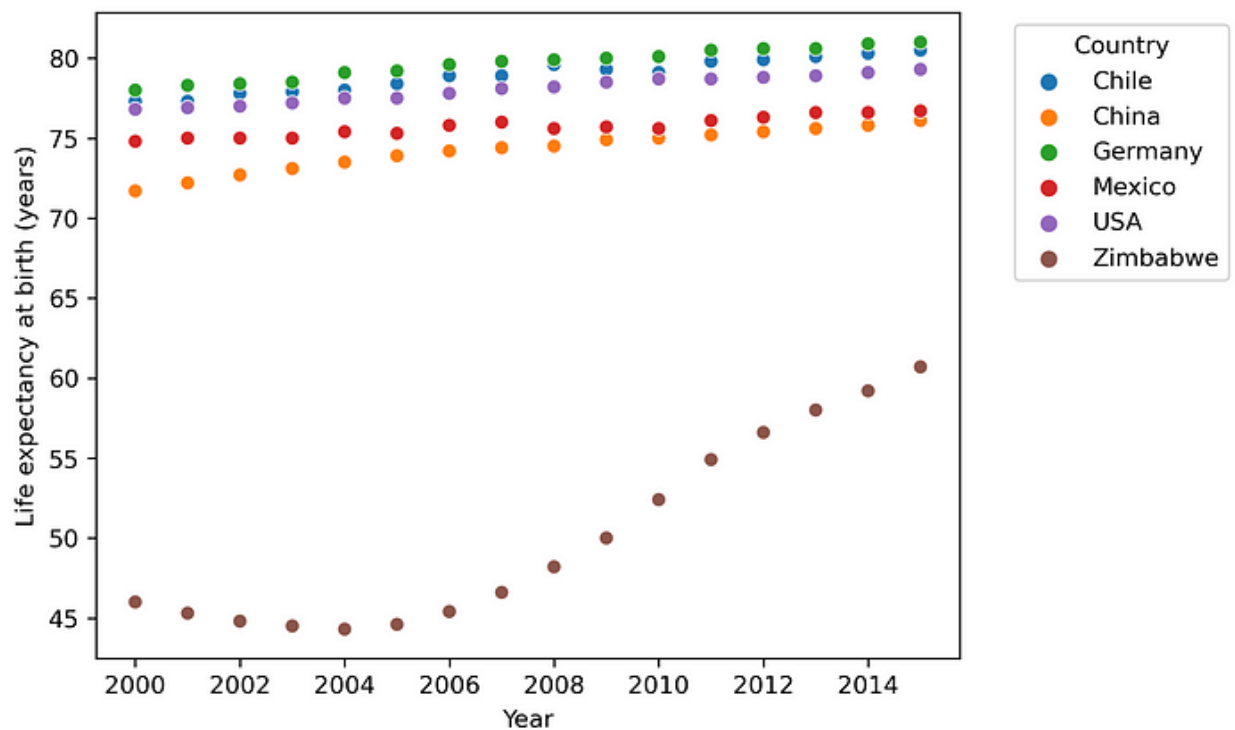


Figure 2. Graph of life expectancy vs time from 2000 to 2015 for each country.

Figure 2 illustrates the relationship between life expectancy and time from 2000 to 2015. Chile, China, Germany, Mexico, and the United States all experienced steady increases in life expectancy over this period, likely reflecting the gradual advancements in medicine and technology within these countries. In contrast, Zimbabwe experienced a decline in life expectancy followed by a sharp rise. This fluctuation may be attributed to significant

changes in GDP during this time, which the country could have leveraged to invest in health initiatives, leading to improvements in life expectancy.

In conclusion, the analysis of GDP and life expectancy from 2000 to 2015 reveals that while higher GDP is often associated with better healthcare and higher life expectancy, the relationship is not straightforward. Countries like Chile, China, Germany, Mexico, and the United States showed steady improvements in life expectancy, likely driven by advancements in medicine and technology. However, Zimbabwe's experience highlights the importance of GDP in improving life expectancy, as the country saw significant fluctuations in life expectancy corresponding with changes in GDP, particularly when investments were made in health initiatives.

This study suggests that while GDP may not have a direct, universally significant impact on life expectancy, countries with low GDPs, such as Zimbabwe, could see marked improvements when there is targeted investment in public health. These findings emphasize the need for a comprehensive approach to health and economic development, particularly in nations with limited economic resources. Further research is needed to explore other factors that may influence life expectancy beyond GDP.