Can the GDP tell us something about life expectancy?

Introduction

In order to understand the relation ship between a countries Wealth and the life expectancy of it´s citziens we first have to define our preferred Indicators. In this case the gross domestic product which includes the registered monetary value of all goods and services that are created within the measured country and which are at some point bought by a user. The GDP per capita is the GDP devided by population size. The life expectancy at birth shows how long a person that is born in the current year is expected to live. Child mortality has a major influence on this indicator.
The Data sources include the World Bank and the OECD National Accounts data files for the GDP and the GDP per capita while data for the life expectancy is obtained fromo the World Health Organization and the World bank. The countries included in the first part of this analysis are Chile, China, Germany, Mexico, The United States of America and Zimbabwe.

Has life expectancy increased over time in the six nations?

Between 2000 and 2015, life expectancy at birth increased in all observed nations in our data set. The increase was steady in all countries except Zimbabwe, where it steadily climbed after 2008 after decreasing in the preceeding years. Zimbabwe and China had the highest relative increases in life expectancy.

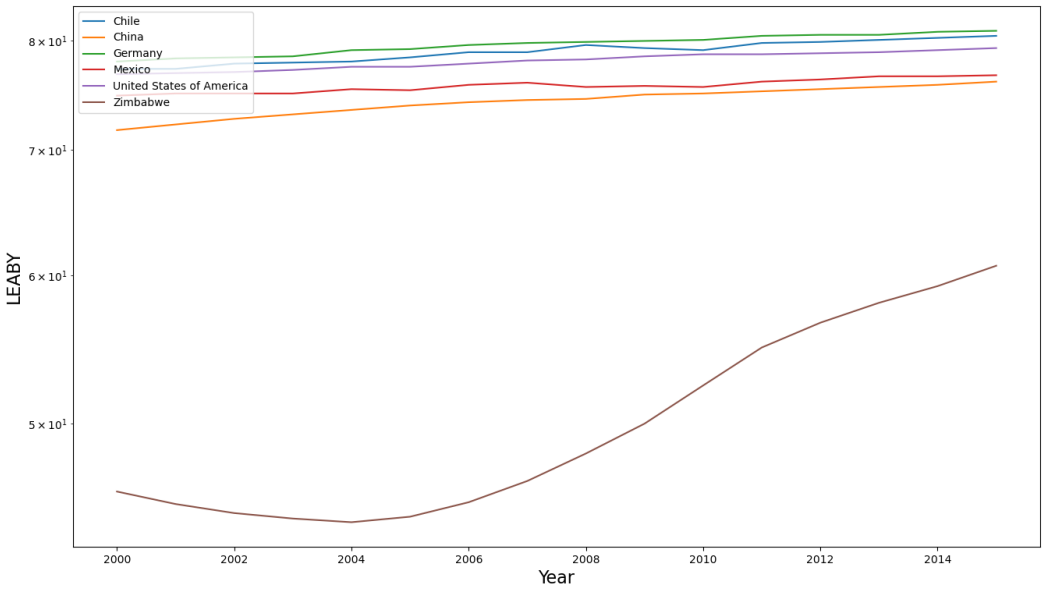


fig 1: *Developement of life expectancy by birth in years over time in six nations (log scale)*

Has the GDP increased over time in the six nations?

Between 2000 and 2015, the GDP increased in all observed nations. In all countries except Zimbabwe, the GDP increased steadily over the observed period. However, in Zimbabwe, the GDP fell until 2008 and then began to grow from that point on.

The countries with the highest relative increase in life expectancy had also the highest increase in GDP in this dataset.

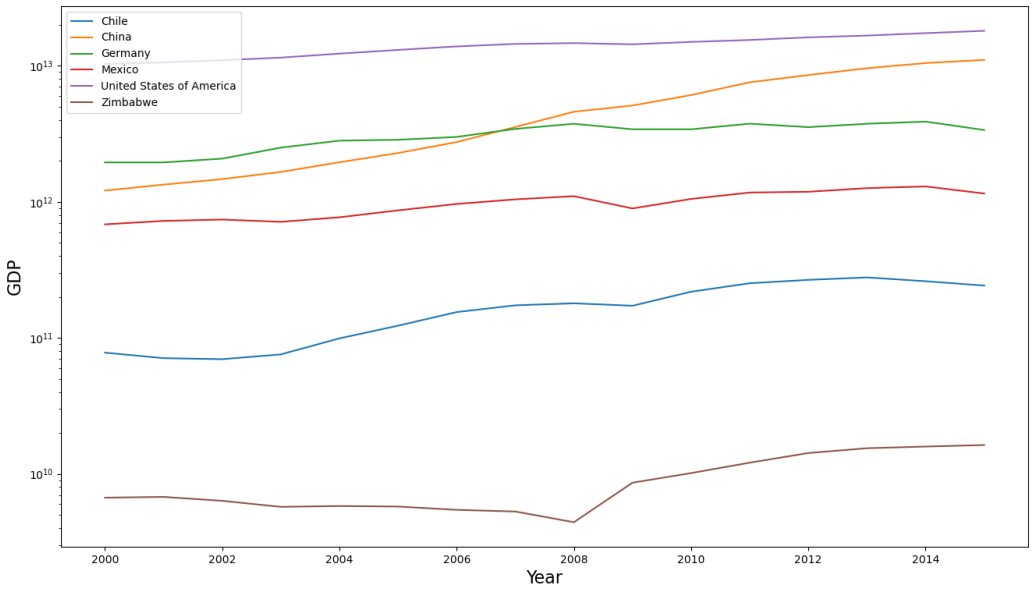
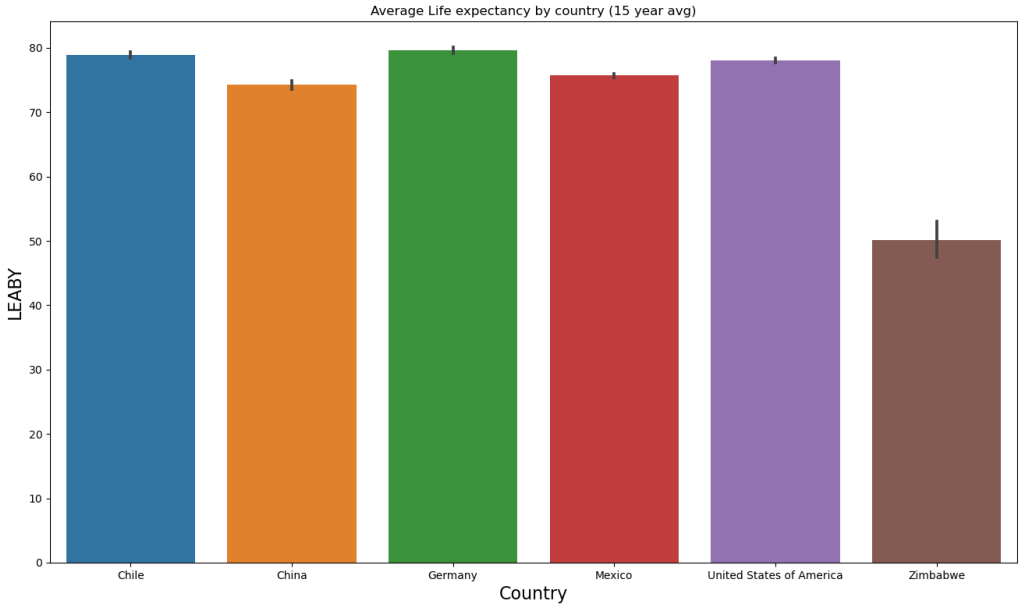


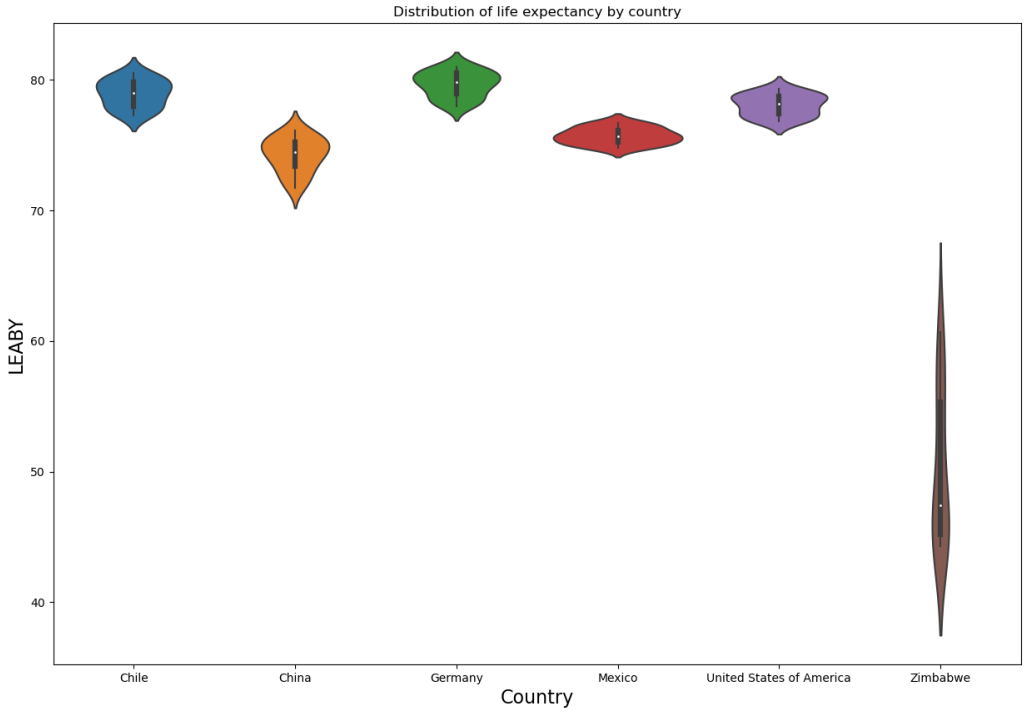
fig 2: *Developement of GDP over time in six nations (log scale)*

What is the current average life expectancy in each of the six nations?

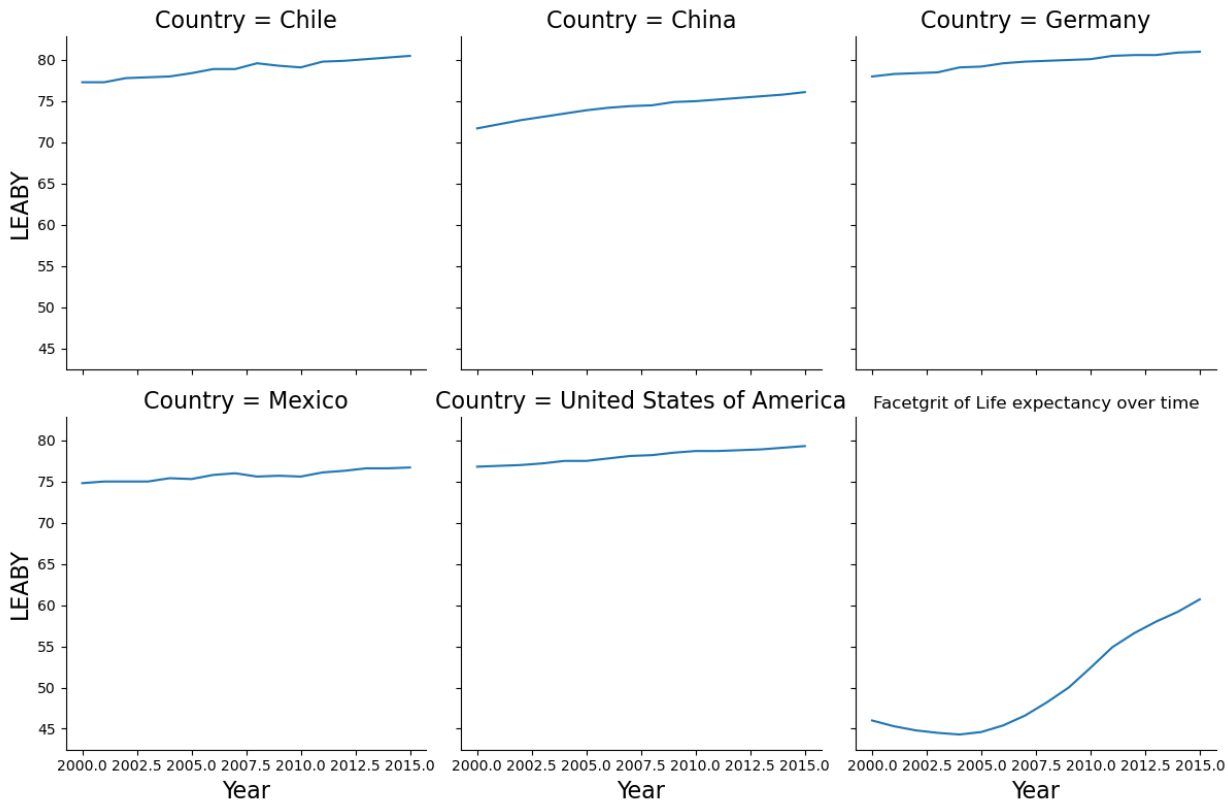


The Average life expectancy can be drawn from the figure.

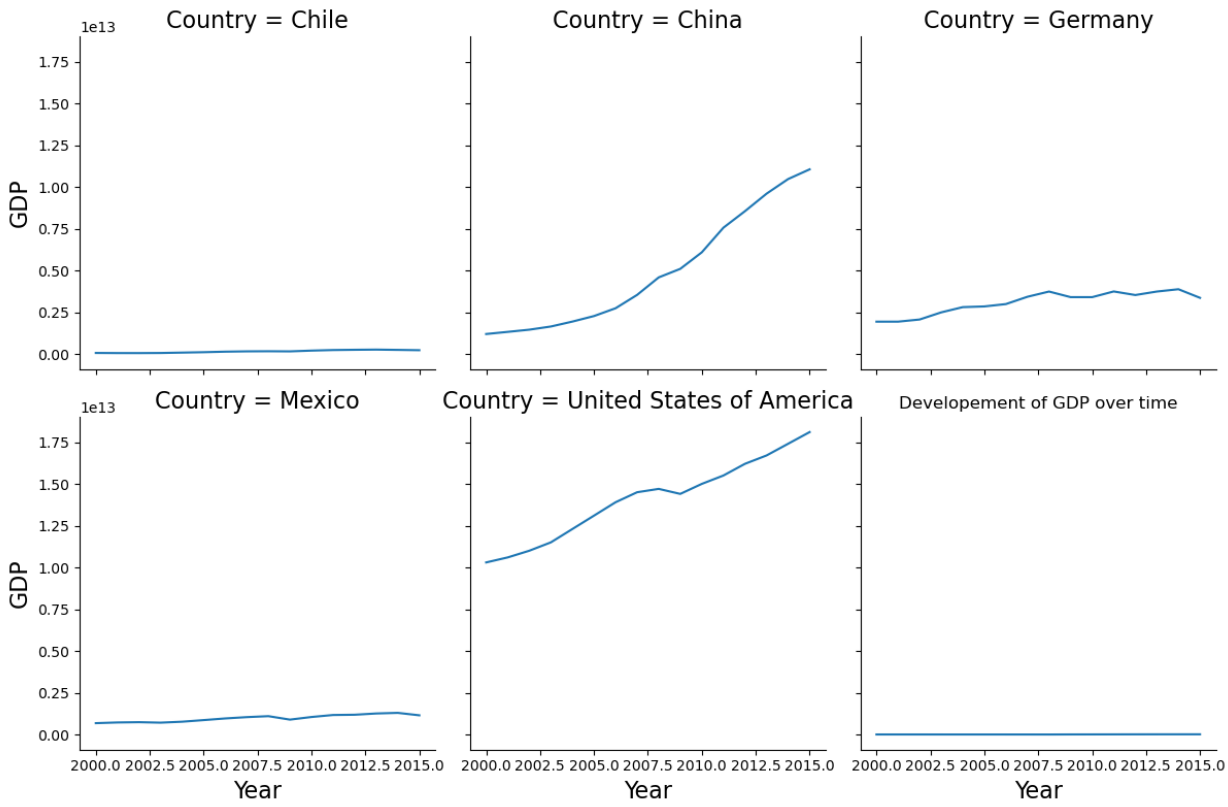
If we have a closer look on the distribution of life expectance throughout the years in the next graph, it becomes apparent in which countries the greates change in Life expectancy occured. In this case Zimbabwe, which also had the greatest increase in both GDP and GDP per capita in the years 2008 to 2015.



Comparing the developement of GDP over time.



The figure above describes the developent of a countries life expectancy over time. Zimbabwe had the greatest increase in life expectancy of the observed nations.

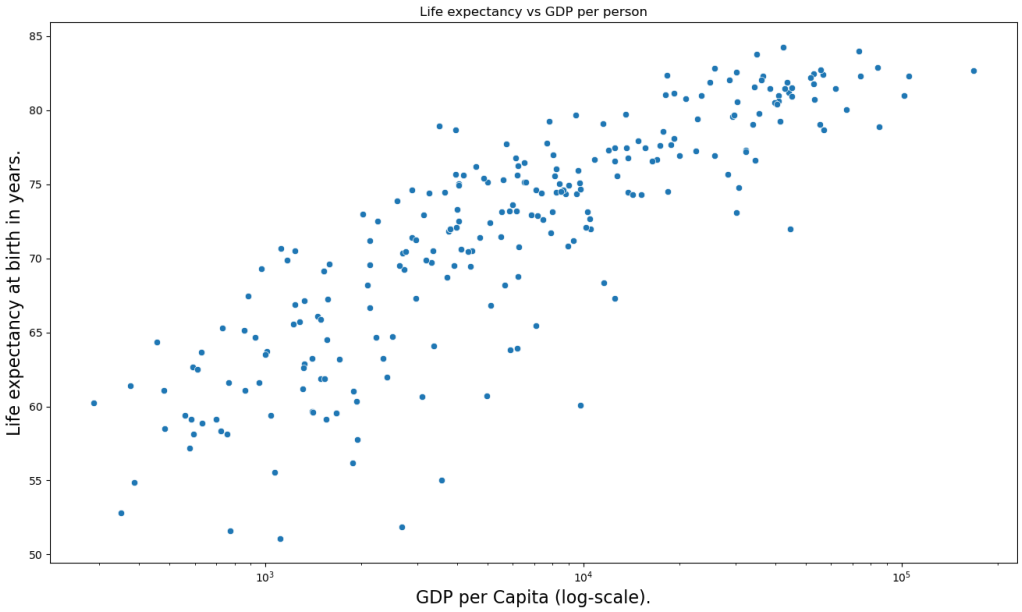


The figure above depicts the development of the Gross Domestic Product (GDP) per country over time. The graph shows that while China and the United States had a significant increase in GDP, Chile and Zimbabwe witnessed almost no increase at all. This observation raises an interesting question: does a country's GDP influence its life expectancy? In the case of Zimbabwe, there appears to be a decoupling of GDP growth from the increase in life expectancy. It is important to examine the relationship between GDP and life expectancy in other countries to draw more comprehensive conclusions about the link between economic growth and the well-being of a population.

Is there a correlation between the GDP and life expectancy of a country?

The question of whether there is a correlation between a country's GDP and life expectancy has been the subject of much debate and research. However, in order to accurately answer this question, we must first abandon the use of gross national product as an indicator of a country's wealth. Instead, we will use GDP per capita, which is calculated by dividing the GDP by the population of a country. This allows for a more accurate representation of a country's wealth and a better understanding of the

relationship between economic growth and the well-being of a population. Furthermore, to ensure that the conclusions we draw are robust and representative, we will increase the sample size from which we draw our data. By doing so, we can gain a more comprehensive understanding of the relationship between GDP and life expectancy.



The graph shows that countries with higher income tend to have higher life expectancy. This means that if people are wealthier, they usually live longer.