

STAT S670 Final Project: Life Expectancy

Executive Summary

Authors: ankale, rdama, sgopalk, sk128

For every country, life expectancy at an average has increased over the years. This can be attributed to multiple factors. For our analysis, the primary focus was on factors like healthcare expenditure, immunization rates, education, and the geographical location. Another factor affecting life expectancy is whether the country is developing or developed. For developed countries, the factors in consideration have higher values as compared to developing countries. Hence, it is important to understand what factors affect life expectancy in these countries and how.

Education is one of the most important factors affecting life expectancy. There is a direct effect of the average years of education of a country on life expectancy. As we know, the emphasis on education has grown for every country if we look at the past few decades. There are many initiatives that have grown popular, trying to raise awareness regarding the importance of education, amongst the developing nations of the world. This resulted in educational development in the developing nations, and as more people get educated, healthier and hygienic choices get inculcated, thus affecting the overall health of the general population. This also raises awareness about the importance of immunizations; hence we can see immunization rates positively affecting life expectancy for all the countries over the years and the positive effects of increased emphasis on education as well.

Apart from this, the amount a country spends on its healthcare systems is of importance as well. For all the countries we could see that higher the healthcare expenditure, higher is the life expectancy (after accounting for years). But it was quite interesting to notice that for a few African nations this was the exact opposite. These countries include Zimbabwe, Botswana, Zambia and more. They have higher healthcare expenditure but low life expectancy, this can be attributed to diseases like HIV/AIDS which affected Africa starting in the early 2000s. Therefore, the above mentioned countries had to spend quite a lot on healthcare, but the overall life expectancy was still lower. But we observed the life expectancy for these nations improved as the years passed. The life expectancy increased from 55 to 63 years at an average for all the countries in Africa, from the year 2000 to 2014. This change was much higher when compared to the rest of the world (i.e., excluding Africa) which was from 72 to 75 years for the same time period.

The overall average life expectancy of the world was 67 years in 2000 and it increased to 72 years in 2014. This can be explained by the factors discussed above. These factors would help a country determine what areas are most important to improve life expectancy.