Prosper and Live Long: the Story Between the Economy and Our Lifespan

Nick Cai

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Life expectancy is one of the most important indicators of a country's health status because it reflects the overall mortality of a country's population. It seems almost natural to think that people living in richer countries live longer than those who live in relatively less developed ones, for richer countries offer better medical care and better food and better environment and so on. But is that really the case? Bear that question in mind, I decided to do a bit of research and now to share with you what I found.

6 countries (Chile, China, Germany, Mexico, United States of America and Zimbabwe) were sampled for this study, covering Asia, America, Europe and Africa, also economies of different characteristics. GDP (a measure of the value of all goods and services produced) and Life Expectancy at Birth in years (LEABY) from 2000 to 2015 are used to represent a country's economy and the lifespan of its nationals. (GDP Source: World Bank national accounts data, and OECD National Accounts data files; Life expectancy Data Source: World Health Organization)

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Let's first get a sense of how the 6 sample countries' people have been living (in terms of length) over the years. From Figure 1, it is easy to notice that between 2000 and 2015, the life expectancy in Zimbabwe almost doubled, followed by China's approximately 5-year increase while the rest have relatively concentrated distributions.

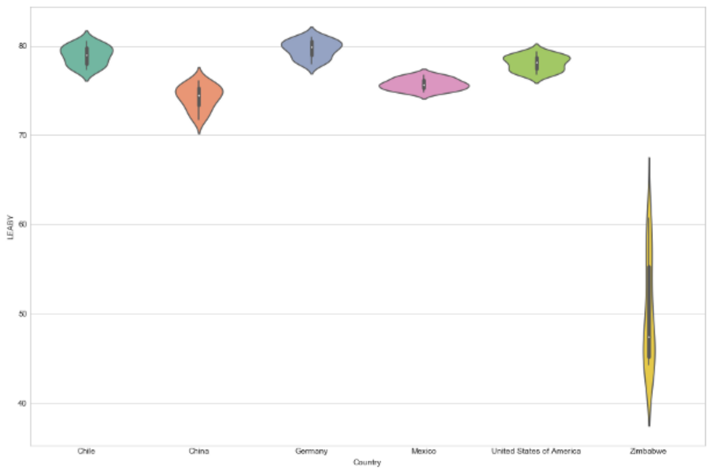

Figure 1 — Life Expectancy Distribution by Country (2000~2015)

By utilising the line graph, now we can compare better the changes in these countries' LEBAYs and see when exactly the big changes happened. As we can see in Figure 2, Zimbabwe's line still shows the biggest change and especially between 2006 and 2015, while Mexico has had the least change over the 15-year time period.

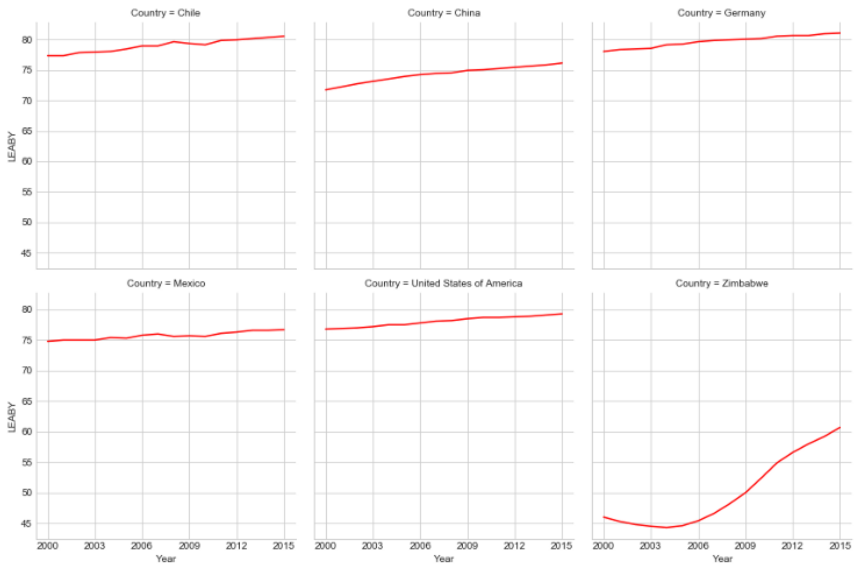

Figure 2 — Life Expectancy by Country (2000~2015)

Now more interesting revelations can be found if we plot the GDPs for the sample period and combine it with Figure 2. While life expectancy saw a drastic increase in Zimbabwe between 2006 and 2015, its GDP did not really move much. This goes against our common sense and the general economic theory. What happened?

A plausible explanation is the distribution of wealth, according to Murwirapachena and Mlambo (2015). Although economic growth has been a steady rise since the unity of the government in 2009, poverty rates were disturbingly high. Revenues have not been used productively and did not benefit the general population much. Many people did not have the financial resources to access proper medical facilities or accommodation.

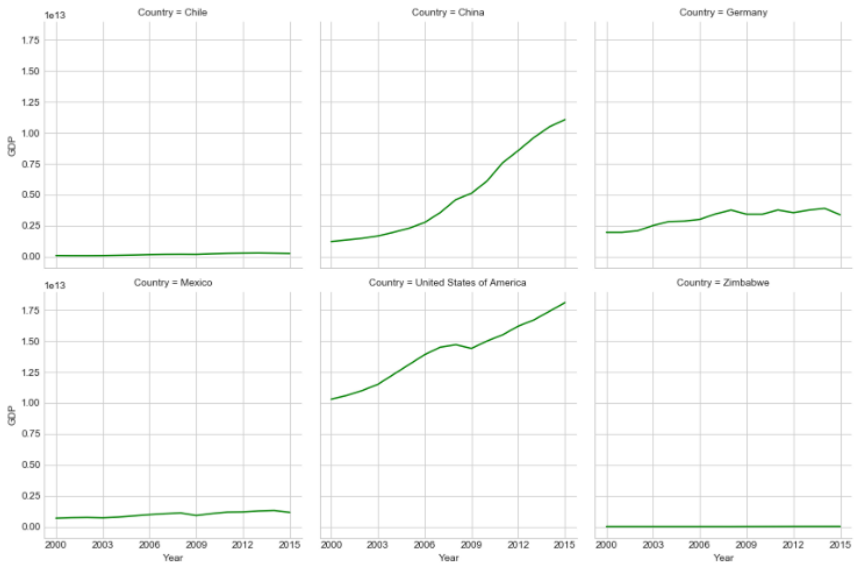

Figure 3 — GDP by Country (2000~2015)

Figure 4 — GDP and Life Expectancy by Year

Nevertheless, though economic growth might not bear a positive relationship to life expectancy in some special situations like what happened in Zimbabwe, we can still see from the study that life expectancy generally tends to be longer in more developed economies and the story of Zimbabwe definitely should not halt us on our quest for prosperity.

Last but not least, since GDP is only as good as for gauging the overall economic level of a country, more research is still needed to see the relationships between life expectancy and per capita variables such as the disposable personal income (DPI).