Brian Lambert
STA 404
Module 1: GDP per Capita compared to Life Expectancy by Country in 2007 Analysis

A graph comparing the GDP per capita and the average life expectancy for each country reveals that there is likely an exponential correlation between GDP and life expectancy in 2007. From a high-level overview, the graph shows that the continent with the most economic and health troubles is Africa. Despite having a more diverse life expectancy range (most between 40 & 65 years) than any other continent, the vast majority of the African countries had a sub-5,000 GDP in 2007. On the other hand, the other continents, Americas, Asia, Europe, and Oceania, all have widely varying GDPs but the life expectancy of most of these countries lie in the small 70-80 years interval. Despite these differences, there is a clear line of best fit that all countries seem to follow.

I believe this graph reveals that there is a sweet spot for GDP where the GDP and life expectancy of the country begin to grow exponentially. In this analysis I'm assuming that GDP plays a larger role on life expectancy than life expectancy plays on GDP because when a country has a high GDP they likely have better health services, such as vaccinations, medicine, life-saving surgeries, etc. These services would therefore increase the life expectancy of the country. Now, if you were to draw a horizontal line at about GDP = 2,500 it's clear that the points that fall under this line have a relatively constant GDP over age. This shows that life expectancy doesn't seem to have much of an effect of GDP. Alternatively, the points that lie above this line have an exponentially increasing GDP over age. So, it seems that once a country reaches a GDP of about 2,500 to 5,000 this enables the GDP and life expectancy of the country

to surge. One could argue as well for a life expectancy sweet spot of about 65, but I would respond to that with my previous statement of how I believe GDP influences life expectancy.