- GDP per capita varies depending on which country you view
- Some countries' GDP per capita today is equivalent to the U.S.'s in the 1870s
- GDP growth rates are measured as the average rate from year x to year y, it does not take into account short-term fluctuations, only the bigger picture
- Countries rankings do not remain constant, they vary from year to year
- The average American today is "richer" than Rockefeller was back when he was worth 250 billion in today's dollars. He didn't have TV's, air conditioning, medicines of today, etc.
- Productivity explains the differences in living standards across the world
- Being more productive results in producing more goods and services, making the standard of living higher, increasing GDP, and economic growth
- What causes differences in productive power?
- Three main factors that determine productivity:
    1. Physical capital: the stock of equipment and structures that are used to produce goods and services, commonly referred to as capital. More sophisticated tools allow workers to produce more efficiently and effectively. These tools are called factors of production, used to produce goods.
    2. Human capital: the knowledge and skills that workers acquire through education and on-the-job training. These skills are far less tangible than physical capital, however, just as important to productivity.
    3. Natural resources: the inputs into the production of goods and services that are provided by nature, such as land, rivers, and mineral deposits. The two types of natural resources are renewable and nonrenewable. Trees are renewable, oil is nonrenewable, etc. Natural resources are not necessary to make a rich and productive economy
    4. Technological knowledge: society's understanding of the best ways to produce goods and services. Understanding the most efficient way to produce goods, allows society to do more with the same amount of resources. This allows for maximum efficiency. To use a relevant metaphor, technological knowledge is the quality of society's textbooks, whereas human capital is the amount of time that the population has spent reading them.
- $Y = AF(L, K, H, N)$
    1. $Y$ = Quantity of output
    2. $A$ = The available production technology
    3. $L$ = The quantity of labor
    4. $K$ = The quantity of physical capital
    5. $H$ = The quantity of human capital
    6. $N$ = The quantity of natural resources
- Divide by L, and this function will give us productivity per person

- Many production functions have constant returns to scale, meaning that if all of these variables doubled, except A, Y would double as well.
- What can governments do to foster production?
- Increase capital, K, physical capital, as this will allow for the production of more goods later on
- This idea of producing more physical capital is equivalent to the idea of saving, using today's goods to increase goods down the line
- Diminishing returns: the property whereby the benefit from an extra unit of an input declines as the quantity of the input increases
- The idea that as you give workers more and more capital, eventually you get less and less production
- Therefore, increasing the savings rate, and saving more money for capital goods, increases productivity in the short run, but not so much in the long run
- It is easier to increase productivity in poor underdeveloped countries, as they have more ground to make up
- Investment from abroad allows countries to invest in other countries, ultimately benefiting both parties
- Education is a great way to increase a country's productivity
- Increases in education result in increased productivity and wages; however, when you go to school, you forgo other activities
- One downside, is that in underdeveloped countries, many of the brightest students who have been educated will leave to more developed countries for better education and standard of living
- A healthier body of workers results in a more productive economy, as they are able to do more
- Property rights and political stability lead to more productive economies, as people are more motivated to work
- Free trade allows for countries to receive and produce more goods in total. Lack of free trade forces countries to produce everything they need for themselves, and discourages specialization
- Technological knowledge has resulted in higher living standards
- Population growth results in a larger economy
- With more people, you need more capital stock