6.19: GDP and Standard of Living

Learning Objectives

- Calculate GDP per capita using population data
- Explain the limitations of GDP as a measure of the standard of living

When economists talk about the **standard of living**, they are referring to the average quantity (and quality) of goods and services that people in a country can afford to consume. Since real GDP measures the quantity of goods and services produced, it is common to use **GDP per capita**, that is real GDP divided by population, as a measure of economic welfare or standard of living in a nation.

GDP Per Capita

The U.S. economy has the largest GDP in the world, by a considerable amount. The United States is also a populous country; in fact, it is the third largest country by population in the world, although well behind China and India. So is the U.S. economy larger than other countries just because the United States has more people than most other countries, or because the U.S. economy is actually larger on a per-person basis? This question can be answered by calculating a country's GDP per capita; that is, the GDP divided by the population.

$$\displaystyle\text{GDP per capita}=\frac{\text{GDP}}{\text{population}}$$

The second column of Table 1 lists the GDP of several countries, showing their GDP as converted into U.S. dollars. The third column gives the population for each country. The fourth column lists the GDP per capita. GDP per capita is obtained in two steps: first, by dividing column two (GDP, in billions of dollars) by 1000 so it has the same units as column three (Population, in millions), then dividing the result (GDP in millions of dollars) by column three (population, in millions).

Table 1. GDP Per Capita, 2013(Source: http://www.imf.org/external/pubs/ft/...ata/index.aspx)

Country	GDP (in billions of U.S. dollars)	Population (in millions)	Per Capita GDP (in U.S. dollars)
Brazil	2,246.00	199.20	11,172.50
Canada	1,826.80	35.10	52,037.10
China	9,469.10	1,360.80	6,958.70
Egypt	271.40	83.70	3,242.90
Germany	3,636.00	80.80	44,999.50
India	1,876.80	1,243.30	1,509.50
Japan	4,898.50	127.3	38,467.80
Mexico	1,260.90	118.40	10,649.90
South Korea	1,304.47	50.20	25,975.10
United Kingdom	2,523.20	64.10	39,371.70
United States	16,768.10	316.30	53,001.00

Notice that the ranking by GDP is different from the ranking by GDP per capita. India has a somewhat larger GDP than Germany, but on a per capita basis, Germany has more than 10 times India's standard of living. Will China soon have a better standard of living than the U.S.? Read the following Clear It Up feature to find out.

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As shown in Table 1, China has the second largest GDP of the countries: $9.5 trillion compared to the United States' $16.8 trillion. Perhaps it will surpass the United States, but probably not any time soon. China has a much larger population so that in per capita terms, its GDP is less than one fifth that of the United States ($6,958.70 compared to $53,001). The Chinese people are still quite poor relative to the United States and other developed countries. One caveat: For reasons to be discussed shortly, GDP per capita can give us only a rough idea of the differences in living standards across countries.

The high-income nations of the world—including the United States, Canada, the Western European countries, and Japan—typically have GDP per capita in the range of $20,000 to $50,000. Middle-income countries, which include much of Latin America, Eastern Europe, and some countries in East Asia, have GDP per capita in the range of $6,000 to $12,000. The low-income countries in the world, many of them located in Africa and Asia, often have GDP per capita of less than $2,000 per year.

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Limitations of GDP as a Measure of the Standard of Living

The level of GDP per capita clearly captures some of what we mean by the phrase "standard of living." Most of the migration in the world, for example, involves people who are moving from countries with relatively low GDP per capita to countries with relatively high GDP per capita.

"Standard of living," though, is a broader term than GDP per capita. While GDP focuses on production that is bought and sold in markets, standard of living includes all elements that affect people's well-being, whether they are market transactions or not. To illuminate the gap between GDP and standard of living, it is useful to spell out some things that GDP does not cover that are clearly relevant to standard of living.

While GDP includes spending on recreation and travel, it does not cover leisure time. Clearly, however, there is a substantial difference between an economy that is large because people work long hours, and an economy that is just as large because people are more productive with their time so they do not have to work as many hours. The GDP per capita of the U.S. economy is larger than the GDP per capita of Germany, as was shown in Table 1, but does that prove that the standard of living in the United States is higher? Not necessarily, since it is also true that the average U.S. worker works several hundred hours more per year more than the average German worker. The calculation of GDP does not take the German worker's extra weeks of vacation into account.

While GDP includes what is spent on environmental protection, healthcare, and education, it does not include actual levels of environmental cleanliness, health, and learning. GDP includes the cost of buying pollution-control equipment, but it does not address whether the air and water are actually cleaner or dirtier. GDP includes spending on medical care, but does not address whether life expectancy or infant mortality have risen or fallen. Similarly, it counts spending on education, but does not address directly how much of the population can read, write, or do basic mathematics.

GDP includes production that is exchanged in the market, but it does not cover production that is not exchanged in the market. For example, hiring someone to mow your lawn or clean your house is part of GDP, but doing these tasks yourself is not part of GDP. One remarkable change in the U.S. economy in recent decades is that, as of 1970, only about 42% of women participated in the paid labor force. By the second decade of the 2000s, nearly 60% of women participated in the paid labor force according to the Bureau of Labor Statistics. As women are now in the labor force, many of the services they used to produce in the non-market economy like food preparation and child care have shifted to some extent into the market economy, which makes the GDP appear larger even if more services are not actually being consumed.

GDP has nothing to say about the level of inequality in society. GDP per capita is only an average. When GDP per capita rises by 5%, it could mean that GDP for everyone in the society has risen by 5%, or that of some groups has risen by more while that of others has risen by less—or even declined. GDP also has nothing in particular to say about the amount of variety available. If a family buys 100 loaves of bread in a year, GDP does not care whether they are all white bread, or whether the family can choose from wheat, rye, pumpernickel, and many others—it just looks at whether the total amount spent on bread is the same.

Likewise, GDP has nothing much to say about what technology and products are available. The standard of living in, for example, 1950 or 1900 was not affected only by how much money people had—it was also affected by what they could buy. No matter how much money you had in 1950, you could not buy an iPhone or a personal computer.

In certain cases, it is not clear that a rise in GDP is even a good thing. If a city is wrecked by a hurricane, and then experiences a surge of rebuilding construction activity, it would be peculiar to claim that the hurricane was therefore economically beneficial. If people are led by a rising fear of crime, to pay for installation of bars and burglar alarms on all their windows, it is hard to believe that this increase in GDP has made them better off. In that same vein, some people would argue that sales of certain goods, like pornography or extremely violent movies, do not represent a gain to society's standard of living.

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Watch It!

Watch this video to learn more about how GDP is used to gauge economic productivity and what other measures are useful in examining a nation's economic growth.

A link to an interactive elements can be found at the bottom of this page.

Learning Objectives

[glossary-page][glossary-term]GDP per capita:[/glossary-term]
[glossary-definition] GDP divided by the population; often used as a measure of standard of living[/glossary-definition] [glossary-term]standard of living: [/glossary-term][glossary-definition]all elements that affect people's happiness, whether these elements are obtained through market transactions or not[/glossary-definition][/glossary-page]

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