Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is the broadest quantitative measure of a nation's total economic activity. More specifically, GDP represents the monetary value of all goods and services produced within a nation's geographic borders over a specified period of time.

To avoid double-counting, GDP includes the final value of the product, but not the parts that go into it. For example, a U.S. footwear manufacturer uses shoelaces and other materials made in the U.S., but only the value of the shoe gets counted; the shoelaces don't.

The equation used to calculate GDP is as follows:

GDP = Consumption + Government Expenditures + Investment + Exports – Imports

The components used to calculate GDP include:

Consumption:
-- Durable goods (items expected to last more than three years)
-- Nondurable goods (food and clothing)
-- Services

Government Expenditures:
-- Defense
-- Roads
-- Schools

Investment Spending:
-- Nonresidential (spending on plants and equipment), Residential (single-family and multi-family homes)
-- Business inventories

Net Exports:
-- Exports are added to GDP
-- Imports are deducted from GDP

The GDP report also includes information regarding inflation:

-- The implicit price deflator measures changes in prices and spending patterns.
-- The fixed-weight price deflator measures price changes for a fixed basket of goods and services.

Types of GDP

There are many different ways to measure a country's GDP, so it's important to know all the different types and how they are used.

Nominal GDP

A country's **nominal GDP** is the raw measurement that includes price increases.

Real GDP

Real gross domestic product is a measurement of economic output that accounts for the effects of inflation or deflation. It provides a more realistic assessment of growth than nominal GDP. Without real GDP, it could seem like a country is producing more when it's only that prices have gone up.

Points to Remember

- Real GDP measures an economy's total goods and services in a given year, taking into account changes in price levels.
- It allows you to compare GDP by year because it takes into account inflation.
- It's a good indicator of where the economy is in the business cycle.
- Knowing real GDP trends can help you prepare for recessions or make good financial decisions.

Real GDP Compared to Nominal GDP

When you hear reports of a country's GDP that don't specify the type of GDP, it is likely to be nominal GDP. Nominal GDP includes both prices and growth, while real GDP is pure growth. It's what nominal GDP would have been if there were no price changes from the base year. As a result, the nominal GDP is higher.

The formula for real GDP is nominal GDP divided by the deflator:

$R = N/D$.

For example, real GDP was $19.073 trillion in 2019. The nominal GDP was $21.427 trillion. The deflator was 1.1234.

$19.073 trillion = $21.427 trillion/1.1234.

The deflator is measure of inflation since the designated base year. That is the ratio of what it would cost today compared to the base year. It's similar to the Consumer Price Index but is weighted differently.

The GDP components report divides production into categories, so you can tell what contributes the most to the economy.[9]

Real GDP also measures services. These include your hairdresser, your bank, and even the services provided by non-profits such as Goodwill. It includes services provided by the military, even when troops are overseas. It also measures housing services provided by and for persons who own and live in their homes, including maid service.

Some services are not taken into account because they're too difficult to measure. These include unpaid childcare, eldercare or housework, volunteer work for charities, or illegal or black-market activities.

Why Real GDP is Used to Calculate Growth

Real GDP is used to compute economic growth. The percentage change in real GDP is the GDP growth rate. You need to use real GDP so you can be sure you're calculating real growth, not just price and wage increases. Here's how to calculate the GDP growth rate.

Real GDP can then be used to determine if the economy is growing more quickly or more slowly than the quarter before, or the same quarter the year before. In this way, you can tell where the economy is in the business cycle.

The GDP growth rate is critical for investors to adjust the asset allocation in their portfolios. They also compare countries' GDP growth rates. Countries with strong growth attract more investors for their corporate stocks, bonds, and even their sovereign debt.

Real GDP tells you how much the economy is producing. Real GDP can be used to compare the size of economies throughout the world. But, to compensate for the different cost of living between countries, you must use purchasing power parity.

Other ways to compare GDP by country is through calculation and comparison of official exchange rates and GDP per capita.

When You Should Use Nominal GDP Instead

You must use nominal GDP when your other variables don't exclude for inflation. For example, if you are comparing debt to GDP, you've got to use nominal GDP since a country's debt is also nominal.

How GDP Affects You

When the GDP growth rate is slowing down or even contracting, the government concerned authority will lower interest rates to stimulate growth. If you are buying a home when this happens, you'd want an adjustable-rate mortgage so you can take advantage of future lower rates. You might even want to think about downsizing.

Declining GDP growth rates can also lead to a recession, which means you should prepare for layoffs. If GDP growth rates are increasing, then you'd want to consider a fixed-rate mortgage. That way, you can lock in low-interest rates.

GDP Per Capita

GDP per capita is a measure of a country's economic output that accounts for its number of people. It divides the country's gross domestic product by its total population. That makes it a

good measurement of a country's standard of living. It tells you how prosperous a country feels to each of its citizens.

Points to Remember

- GDP per capita is a country's economic output divided by its population.
- It's a good representation of a country's standard of living.
- It also describes how much citizens benefit from their country's economy.
- Purchasing power parity compares different countries' economic output.

GDP per Capita Formula

The formula is GDP divided by population, or GDP/Population. If you're looking at just one point in time in one country, then you can use regular, "nominal" GDP divided by the current population. "Nominal" means GDP per capita is measured in current dollars.

If you want to compare GDP per capita between countries, you must use purchasing power parity. That creates parity, or equality, between economies by comparing a basket of similar goods. It's a complicated formula that values a country's currency by what it can buy in that country, not just by its value as measured by its exchange rates.

The Largest Economies Aren't the Richest per Capita

U.S. GDP was $20.54 trillion in 2018. But one reason America is so prosperous is that it has so many people.

The United States is the third most populous country after China and India. The United States must spread its wealth among 327.2 million people as of 2018. As a result, the 2018 U.S. GDP per capita was $62,794. That makes it one of the most prosperous countries per person.

GDP per capita allows you to compare the prosperity of countries with different population sizes.

By some measurements, China has the largest GDP in the world. It produced $25.4 trillion (factoring in purchasing power parity) in 2018. But its GDP per capita was only $18,237 because it has four times the number of people as the United States. It's the most populous country in the world, with 1.4 billion people.

The European Union is the world's second most prosperous *economy*, at $22.4 trillion. It's an economy made up of 27 separate countries. Its GDP per capita was only $43,738 because it must spread the wealth among 513.2 million people. India's GDP was $10.5 trillion but spread among its 1.35 billion people, its GDP per capita was $7,763. Japan's GDP is $5.4 trillion, the fifth largest in the world. Its GDP per capita was $42,798 since it has 126.5 million people.

The 10 Highest GDP per Capita (2018)

The countries with the highest economic production per person have thriving economies and few residents. The top 10 GDP per capita according to the World Bank are:

1. Qatar: $126,898
2. Macao: $123,892
3. Luxembourg: $113,337
4. Singapore: $101, 531
5. Ireland: $83,203
6. Brunei Darussalam: $80,920
7. United Arab Emirates: $75,075
8. Kuwait: $72,897.6
9. Cayman Islands: $72,607.6
10. Switzerland: $68,060

Five of the IMF's top 10 (Qatar, Brunei, Norway, United Arab Emirates, and Kuwait) are oil exporters with small populations. These countries were fortunate enough to have access to a large, abundant natural resource that is not labor-intensive to develop.

The other countries have worked hard to become regional technology or financial centers. Low tax rates and friendly business climates have induced global corporate headquarters to locate there. These sectors are not labor-intensive to develop, so wealth can be generated and distributed among a small population.

The 10 Poorest Countries per Capita (2018)

The world's poorest countries, as measured by GDP per capita (World Bank), are:

1. Burundi: $744
2. Central African Republic: $860
3. Democratic Republic of the Congo: $932
4. Niger: $1,063
5. Liberia: $1,309
6. Malawi: $1,311
7. Mozambique: $1,460
8. Sierra Leone: $1,602
9. Togo: $1,774
10. Guinea-Bissau: $1,799

Ten of the world's poorest countries are in Africa. There are many theories as to why African countries are so poor. One of the most credible is simply because of their size. Small countries cannot build economies of scale. Unlike U.S. companies, they don't have a large domestic market they can easily use as a test market. This could be addressed by creating a single market, similar to the European Union.

Second, many African countries are landlocked, meaning they don't have direct access to the global market. They must rely on neighboring countries to get their goods to market. That increases their cost, making their prices less competitive. Even African countries with ports face large transportation costs in getting their goods to other markets.

Real GDP Per Capita

Real GDP per capita is a measurement of the total economic output of a country divided by the number of people and adjusted for inflation. It's used to compare the standard of living between countries and over time.

This economic indicator consists of the following three concepts. You must understand these first if you want to comprehend GDP per capita.

The first concept is "gross domestic product." That measures everything that a country produces in a year.
The components of GDP are personal consumption, business investment, government spending and exports minus imports.

The second is "real GDP," which is GDP without the effect of price changes. Inflation makes regular, "nominal" GDP higher, so real GDP is a more accurate measurement when you want to compare an economy over time.

The third is "per capita," which means "per person." Real GDP is divided by the population of a country to calculate real GDP per capita. It's the best way to compare economic indicators like GDP for countries with very different population sizes.

Real GDP per Capita Formula

The formula for real GDP per capita depends on what data you have available. Let's start with the simplest. If you already know real GDP (R), then you divide it by the population (C):

R / C = real GDP per capita.

If you don't know real GDP, you can calculate it from nominal GDP (N) if you know the implicit price deflator (D). The deflator is the ratio of what goods and services would cost today if there had been no inflation since the base year. It's similar to another measure of inflation, the Consumer Price Index. Its components are weighted differently.

Here's the formula to calculate real GDP per capita (R) if you only know nominal GDP (N) and the deflator (D):

(N / D) / C = real GDP per capita

The best way to calculate real GDP per capita is to use the real GDP. Then just divide it by the population.

GDP Growth Rate

The GDP growth rate measures how fast the economy is growing. It does this by comparing one quarter of the country's gross domestic product to the previous quarter. GDP measures the economic output of a nation.

The GDP growth rate is driven by the four components of GDP. The main driver of GDP growth is personal consumption. This includes the critical sector of retail sales. The second component is business investment, including construction and inventory levels. Government spending is the third driver of growth. Its largest categories are Social Security benefits, defense spending, and Medicare benefits. The government often increases spending to jump-start the economy during a recession. Fourth is net trade.

Points to Remember

- The GDP growth rate indicates how fast or slow the economy is growing or shrinking.
- It is driven by the four components of GDP, the largest being personal consumption expenditures.
- GDP growth rate is a vital indicator of economic health.
- When measuring growth the real GDP is used because it adjusts for the effects of inflation.

Why the GDP Growth Rate Is Important

The GDP growth rate is the most important indicator of economic health. It changes during the four phases of the business cycle: peak, contraction, trough, and expansion.

When the economy is expanding, the GDP growth rate is positive. If it's growing, so will businesses, jobs, and personal income. But if it expands beyond 3%-4%, then it could hit the peak. At that point, the bubble bursts and economic growth stalls.

If it's contracting, then businesses will hold off investing in new purchases. They'll delay hiring new employees until they are confident the economy will improve. Those delays further depress the economy. Without jobs, consumers have less money to spend.

If the GDP growth rate turns negative, then the country's economy is in a recession. Negative growth is when GDP is less than the previous quarter or year. It will continue to be negative until it hits a trough. That's the month things start to turn around. After the trough, GDP turns positive again.