Beginners:GDP - What is gross domestic product (GDP)?

Statistics Explained

What is gross domestic product (GDP)? GDP is the most common measure for the size of an economy. It measures the total value of goods and services produced by that economy during a specific time period, typically a year or a quarter. This helps us understand changes in the size of an economy across different time periods and serves as a broad indicator for the standard of living of its population.

It can be calculated for a country, a region (such as Tuscany in Italy or Burgundy in France), or for groups of countries, such as the EU .

Policymakers, businesses, and institutions use GDP to make key economic decisions. In the EU, GDP is calculated for various reference periods. Generally, it is referred to as **annual GDP** when the reference period is a calendar year but it is also calculated every 3 months, this is called **quarterly GDP** .

Click on the image to watch the video on GDP

GDP covers all **goods** and **services** produced for **final use** .

Example: If an engineering company produces some special machines for its own use, a building company builds new offices for itself, or a business develops software for in-house use, these goods and services are included in GDP, even though they are not actually sold.

The same applies if Josefina makes a major change to her house by herself. Just as any construction work done by (unpaid) volunteers, it would be counted as part of GDP

Intermediate goods that are used in the production process are not counted in GDP.

Example: The steel produced by a steel manufacturer and sold to a car manufacturer would be considered an

intermediate good, as it is used in the production of cars, which are final goods included in GDP.

Flour sold to a bakery is considered an intermediate good, as it is used in the production of bread, which is a final product included in GDP.

Furthermore, GDP also includes all **goods** which are produced by **households** for **own use** .

Example: If Kamila grows some vegetables at home, brews some beer or makes clothes or furniture — all for her own personal use — all this work contributes to GDP in her country. In practice, this type of work tends to be very small in scale in developed economies, and only some major categories will be surveyed or estimated for inclusion in GDP.

However, there are some types of work that are **not included** in GDP and they mainly concern services such as housework, everyday domestic services and personal care.

Example: When Alessandro is at home and cleans the house, cooks dinner, washes and irons clothes or babysits for his younger brothers or sisters, none of that contributes to GDP.
However, if he is paid to do any of those services for someone else, for example, cleaning, cooking, ironing or babysitting in a hotel, this would contribute to GDP.

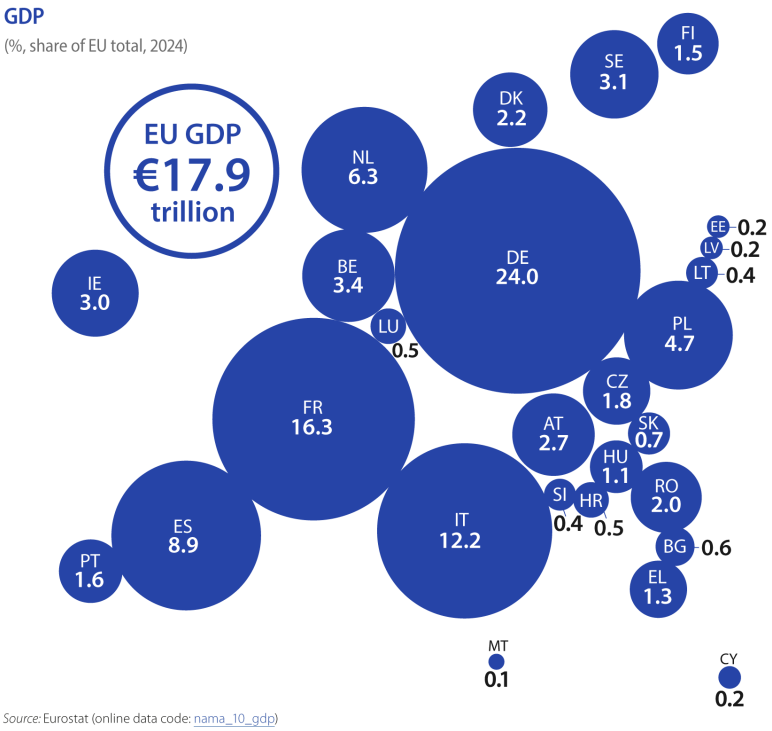
In fact all **volunteer services** — as opposed to the volunteer production of goods — are **excluded** , regardless of who benefits from the work, whether it is you and your family or an organisation, like a charitable or sports/youth organisation.

What about the black/grey or informal economy?

GDP includes **estimates** of all unreported transactions happening beyond the formal economy, for example untracked cash payments to a worker whose work is not declared to the authorities (therefore not registered for taxes and not eligible for social security). Other activities considered illegal in most countries are also estimated to calculate GDP, such as buying counterfeit goods, smuggled cigarettes and drugs, and prostitution.

Making these estimates for unreported transactions and illegal activities is not easy: more in-depth information on this topic can be found in the Statistics Explained article: Building the System of National Accounts .

In the visualisation below you can see the value of GDP in the EU and the share (or contribution) of each EU country.



Source: Eurostat (online data code: nama_10_gdp)

Who is interested in GDP and why?

GDP is essential for anyone involved in **economic decision-making** , whether at national, international, or individual level. It provides a snapshot of a country's economic performance and future prospects.

The change in inflation-adjusted (so called real) GDP over time is used as the main economic indicator of economic growth in a country.

Governments use GDP data to design economic policies:

- fiscal policy (taxes and government spending)
- monetary policy (interest rates and money supply)

They monitor GDP to assess whether the economy is growing, stagnating, or shrinking. This influences decisions on public spending, taxation, and interest rates .

Central banks , e.g., the European Central Bank, closely track GDP growth to determine interest rates and money supply. If the economy is growing too fast, they might raise interest rates to prevent inflation . If the economy is shrinking, they might lower interest rates to stimulate growth.

Economists use GDP to analyse the health of an economy, understand economic cycles, and predict future growth. Researchers might also use GDP data to compare the economies of different countries or to study the effects of different economic policies.

Businesses and investors use GDP data to forecast economic conditions and plan their strategies. A growing GDP suggests a healthy economy, which could lead to increased consumer spending, benefiting businesses. On the other hand, a shrinking GDP might signal an economic downturn, leading to more cautious business decisions.

Foreign governments and trade partners are interested in GDP to assess the stability and potential of another country's economy, which can influence trade agreements, investments, and foreign policy decisions.

How is GDP used as a reference?

As well as being a useful analytical tool in its own right, GDP can also be used as a reference for many other types of statistics and indicators.

Research and development (R&D)
R&D intensity is a common indicator when looking at the competitiveness of different economies. This is because there is a general connection between how innovative and competitive a country is and the amount it invests in science and innovation. R&D intensity is calculated by comparing spending on R&D with overall GDP.

Government finance statistics
Another use of GDP is in government finance statistics. As well as borrowing or lending money, governments can also owe money and increase public debt. When government expenditure is greater than its income, a government deficit is recorded. Both measures are often compared to GDP and expressed as a percentage of GDP.

These are just 2 examples where GDP is used as a reference: there are many more cases. More in-depth information on the various uses of national accounts in general and GDP in particular is here: Main users of national accounts .

How is GDP calculated?

GDP is a key measure within a wider framework of economic statistics which is often simply referred to as **national accounts** . The European system of national and regional accounts (ESA 2010) defines the binding standards and methods used for compiling these accounts, whereas the global standard set by the United Nations (UN) is called the System of National Accounts (SNA) .

GDP can be calculated in 3 ways, but the most common is the **production method** .

Production method

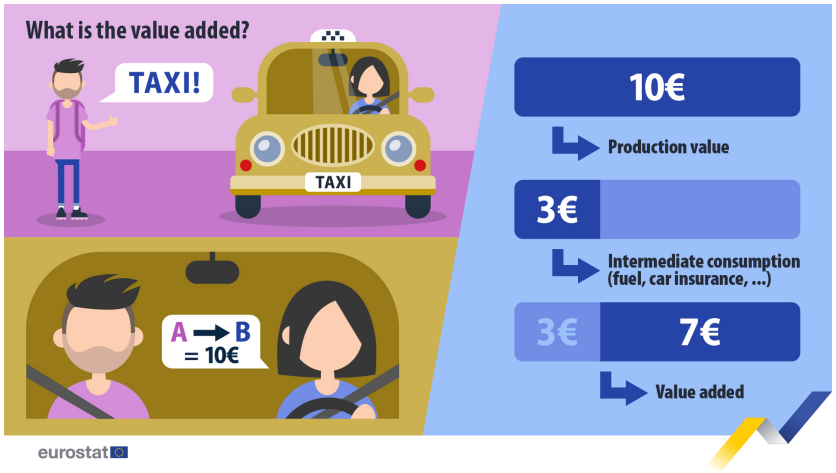
To calculate GDP, the production method adds up the value added of all industries (using basic prices). Then, **taxes on goods or services** are added and **subsidies** on goods or services are subtracted, resulting in the value of GDP at market prices. To help understand the production method, see the boxes below which explain what value added and basic prices are.

What is value added?

The **value added** of production is the*extra value* that has been created from the making of goods and services. In simple terms, it is the value of goods and services produced minus the value of materials and other goods and services consumed in the production process (known as **intermediate consumption**).

As you can see in the **visualisation** below, Leonie is a taxi driver and charges a customer € 10 for a trip and that is the **value of her service** . In order for Leonie to provide this service she must pay for petrol, car insurance and a number of smaller items which all together for this trip cost her € 3; this is her **intermediate consumption** .

Her value added for this trip is the production or service value minus the cost of the intermediate consumption: € 10 - € 3 = € 7.



What are basic prices?

The actual price of goods and services that buyers pay when obtaining them from sellers is the **market price** .

The **basic price** is the amount of money actually received and kept by the producer. Basic prices and market prices differ by taxes and subsidies on products.

Example: Frank has an enterprise that produces energy efficient washing machines. He values each washing machine at € 400. The VAT rate of the country which Frank lives in is 20%; therefore, Frank sells the washing machines at € 480 each. Due to the energy crisis, the government subsidizes the purchase of an energy efficient washing machine with € 100. Sven decides to buy an energy efficient washing machine from Frank's enterprise. He only needs to spend € 380.

In this example, € 400 is the basic price and € 380 is the market price. The tax applied on each product (€ 80) and the subsidy offered by the state (€ 100) balance are the difference between the basic and the market price.

There is not a single way to calculate GDP. While the production approach is the most commonly used method used by statisticians to measure GDP, there are 2 other methods to obtain the value for GDP: the expenditure and the income method . They are equally important as they can help reduce the uncertainty in the measurement of GDP. Ideally, the 3 methods should all lead to the same result.

Expenditure method

Another way to measure how well a country's economy is doing is to look at how much money is spent on different things such as goods and services. This is called the expenditure method for calculating GDP

The formula is:

GDP = Consumption + Investment + Government Spending + Net Exports

Let's break that down:

Consumption – This includes all the money people (households) spend on goods and services, such as

- **Durable goods** – things that last a long time, like cars or furniture
- **Non-durable goods** – everyday items like food and clothing
- **Services** – activities like going to the doctor, getting a haircut, or paying for education

Investment

Investment is money spent on things that help businesses make more products in the future, this includes

- Machines and tools
- New factories or offices
- Houses or apartments
- Computers and software

Government Spending

This is what the government spends money on, such as

- Paying teachers, police, and firefighters
- Building roads, bridges, and hospitals
- Providing services like public schools and healthcare

(This doesn't include things like pensions or unemployment benefits, because those aren't payments for goods or services.)

Net Exports

This means the value of what a country sells to other countries (exports) minus what it buys from other countries (imports).

If a country sells more than it buys, that adds to GDP.

If it buys more than it sells, that takes away from GDP.

Income method

A third way to find out GDP is by adding up all the money people earn in the country. This is called the income method. What do we add together?

Wages and Salaries: This is the money people earn from their jobs, like teachers, doctors, and workers in factories.

Profits: This is the money businesses make after they pay for everything they need, like paying workers and buying supplies.

Taxes (minus subsidies): This is the money the government collects through things like sales taxes, but we take away the money the government gives back to help businesses.

Play with statistics

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