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How to calculate GDP

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This note addresses the process of calculating an important summary statistic: Gross Domestic Product (GDP). In that regard, it briefly outlines the different methodologies used for the calculation of quarterly and annual GDP. It explains the crucial role of the Supply and Use Table for annual GDP calculation. It clarifies why quarterly GDP is necessarily subject to revisions. It also makes clear that GDP includes a component of the economy not captured by conventional statistical sources. It mentions some limitations and criticisms that can be expressed about GDP as a synthetic measure of economic activity.

How to calculate GDP

1. Why is it important to know GDP?

To quickly assess the performance of a national economy, it is common to use a set of macroeconomic indicators, that is, indicators that summarize the overall performance of the economy, among which the growth rate in volume of Gross Domestic Product (GDP) stands out.

This indicator plays a fundamental role in assessing and designing economic policy, as well as in forming judgments, expectations, and even decisions at the microeconomic level.

With the aim of enabling international comparison of National Accounts results, particularly GDP, the United Nations developed a conceptual and methodological system: the System of National Accounts (SNA). The current version is SNA 2008, with the new SNA 2025 having been recently approved.

In the European Union, an additional step was taken. Although consistent with the SNA, a specific manual was produced —the European System of National and Regional Accounts (ESA 2010, annexed to Regulation (EU) No. 549/2013—which is mandatory for all Member States. This legal framework aims to adapt the SNA to European economy specificities, deepen methodological guidelines on specific topics such as government accounts, and ensure a high degree of comparability between a set of essential indicators, particularly GDP, due to its relevance, in at least four concrete cases:

- The deficit and debt of General Government, in the semi-annual notifications to the European Commission under the Excessive Deficit Procedure, must be expressed as a percentage of GDP.
- More recently, some reference indicators for the Macroeconomic Imbalance Procedure are also presented as percentages of GDP.
- A substantial part of each Member State's contribution to the EU budget is determined based on its Gross National Income (GNI), which is obtained from GDP (GNI equals GDP plus the balance of primary incomes from the rest of the world, which in Portugal is usually negative);
- The allocation of structural funds is determined taking into account GDP, expressed in purchasing power parities, for both Member States and their regions.

At the national level, it is also worth noting the indexation of updates to social benefits (e.g., retirement pensions) and the interest rate of certain government financial instruments, to real GDP growth.

Therefore, it is worth explaining what GDP is and the main procedures involved in its calculation.

2. What is GDP?

GDP represents the final result of the economic activity of institutional units resident in a given territory, over a specific period of time (typically a year or a quarter).

This result can be obtained according to three approaches:

• Supply or production approach: GDP corresponds to the sum of gross value added (GVA, which is equal to production minus the intermediate consumption required to obtain it) at basic prices for the different branches of activity, plus taxes net of subsidies on products.

• Demand or expenditure approach: GDP corresponds to the sum of final consumption expenditure by resident households, non-profit institutions serving households (in simpler terms, the sum of these two aggregates corresponds to private consumption) and general government (in this case also commonly referred to as public consumption), together with investment and exports net of imports.

• Income approach: GDP corresponds to the sum of compensation of employees, taxes on production and imports net of subsidies, and gross operating surplus.

There are some important observations that can be made following this concept of GDP.

First, GDP is not equal to the total production of an economy, since part of the products - intermediate consumption - is used to produce other products. GDP corresponds to the concept of net production or value added.

From the expenditure approach, since the value of products used as intermediate consumption is incorporated into the value of products for final consumption, investment or exports (which together form what is called total demand), intermediate consumption is not considered in the calculation of GDP. Total demand is satisfied by domestic supply (GDP) and external supply, i.e. imports. Consequently, to obtain GDP from the expenditure perspective, it is enough to subtract imports from total demand.

GVA is divided into three main components: compensation of employees, taxes net of subsidies on production, and gross operating surplus (which includes taxes, interest, rents, distributed profits, namely dividends, and undistributed profits). Thus, an alternative way of estimating GDP is to sum these three components.

GDP aims to comprehensively reflect the outcome of economic activity. Conceptually, this means that, regardless of whether the activity is formal, informal, or even illegal, GDP should cover all economic activity carried out. GDP includes, notably:

(i) The production of services by general government and non-profit institutions serving households, for which, in general, it is not possible to identify a market and/or the price charged is not economically meaningful (which is why their accounting is essentially based on the costs of production);

(ii) Housing services associated with owner-occupied dwellings;

(iii) The production of goods for own final use.

Each of these components is highly relevant in Portuguese GDP, with particular emphasis on the first, which broadly corresponds to the final consumption of general government (around 17% of GDP). The second gained importance, especially from the second half of the 1990s onwards, when the purchase of own housing and secondary residences expanded (imputed housing rents, corresponding to the value of housing services associated with owner-occupied dwellings, represent about 6% of GDP). The third, where self-consumption of agricultural goods predominates, has less weight but traditionally still holds a significant value in our economy (around 0.2% of GDP).

GDP also includes illegal activities such as prostitution, drug production and trade, and smuggling (these three activities account for approximately 0.4% of GDP), as well as production that, for various reasons (tax evasion, lack of structured accounting) is not captured by conventional statistical sources.

However, there are activities not considered in GDP calculation: services produced by households for their own use (such as meal preparation, childcare and elderly care within the family, etc.) and volunteer work[1]. Additionally, collaborative activities and the provision of services during leisure time, without any monetary or in-kind remuneration, are also excluded. Although these types of activities may contribute to greater well-being and more efficient use of resources, they fall under what is known as the collaborative economy. Furthermore, with the intensive use of the internet and other new technologies (digital economy), there is a set of new activities that are not explicitly accounted for in the national accounts system.

Conversely, the destructive effect of economic activity on the environment is generally not negatively reflected, meaning there is no “green GDP”.

3. How is GDP calculated?

Based on the methodology of the Portuguese national accounts, it is useful to distinguish between two cases: annual calculation and quarterly calculation.

The methods and statistical sources used are different.

In the first case, the information used to compile GDP is more abundant and comprehensive and becomes available after a relatively long period (up to two years) after the reference year.

In the second case, it is necessary to produce estimates from very incomplete information even before the end of the following quarter. Given its timeliness, quarterly accounts tend to attract a significant attention from the media and public authorities. However, although less publicised, annual accounts provide the structure on which quarterly accounts are based.

[1] Within the framework of the Social Economy Satellite Account, Statistics Portugal estimated that in 2018, volunteer work hours accounted for about 2.9% of total hours worked, corresponding to a value close to 0.8% of GDP (see ‘Press Release’ of 19 July 2019).

A) Annual national accounts

As mentioned, GDP can be obtained through three approaches - production, expenditure and income.

In most European countries, subject to the ESA 2010, the income approach plays a secondary role because the gross operating surplus, one of its main components, is calculated residually by subtracting from GVA wages and taxes on production and imports net of subsidies. In other words, there is truly no prior independent calculation of GDP through the income approach. However, it is important to note that the amounts calculated for interest, rents, dividends and undistributed profits from very heterogeneous and incomplete statistical sources (involving, in particular, Balance of Payments statistics and monetary and financial statistics compiled by the Banco de Portugal; data from the Simplified Business Information (SBI), public finance information and tax data compiled by Ministry of Finance) must be relatively consistent with the previously calculated operating surplus. If this is not the case, GVA (and therefore expenditure) initially calculated is reassessed, with an in-detail analysis of base information and consulting the sources if necessary.

This process is iterative and leads to the reconciliation of the GDP calculation approaches.

The production and expenditure approaches play a predominant role in the GDP calculation, but this does not mean that two independent estimates are made. In fact, these two approaches are combined in a fundamental tool, the Supply and Use Table (SUT)[2].

In simplified terms, for each specific product, this table establishes the balance between the quantity produced (resources) and the quantity used. The table has as many rows as the products considered (in Portuguese national accounts, about 430) and, for each row, the columns on the left correspond to the resources, whose total must equal the sum of the various uses corresponding to the columns on the right. In schematic terms:

Resources							Uses								
Domestic output at basic prices			Imports	Taxes less subsidies on products	Trade and transport margins	**Total**	Intermediate consumption	Final consumption			Investment			Exports	**Total**
Market	Non-market	For own final use						Households	Non-Profit Institutions Serving Households	General Government	Gross fixed capital formation	Changes in inventories	Acquisitions less disposals of valuables		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)

[2] Abbreviated versions of this table are published annually as part of the set of tables in the [final annual accounts.]

Summing all rows, in the production approach, GDP is obtained by adding the totals of columns (1), (2), (3), (5) and (6), which corresponds to domestic production minus the total of column (8), intermediate consumption.

From an expenditure approach, GDP is obtained by adding the totals of columns (9) to (15) minus the total of column (4).

By ensuring, row by row, that total resources equal total uses, GDP calculated under the production approach will necessarily equal GDP calculated from the expenditure approach.

It is important to underline that, despite the general procedure described above, in economic production there are two major groups of products that differ in terms of monetary valuation: market production, where the valuation reflects market prices; and non-market production, i.e. not traded in the market, whose value r reflects the costs incurred to provide it.

Non-market production, which basically corresponds to services provided by general government and non-profit institutions serving households, is valued by the costs incurred by these entities to provide them, namely wage costs and the cost of acquiring the goods and services used.

Production of goods for own use, the third component of domestic production, is estimated based on the market price of similar products and services.

Column (6) of the SUT refers, in particular, to trade and transport margins associated with product transactions. These margins, together with net taxes, have to be added to production at basic prices to obtain production valued at the final price at which it becomes available for use. In the part of the table concerning uses, column (14) refers to acquisitions less disposals of valuables, such as works of art and valuables objects.

To complete the SUT, a set of statistical sources of various types is used, notably:

- Simplified Business Information (SBI)[3], which involves the annual submission of a vast set of information, mainly accounting data, to various public entities (including Statistics Portugal), by around 550 thousand companies in 2023, the vast majority of which have the legal status of corporations.

- International trade in goods statistics, produced by Statistics Portugal;

- Balance of payments statistics, compiled by the Banco de Portugal;

- General State Account and tax data in the field of public finances;

- Social Security data;

[3] This information is processed beforehand, prior to its incorporation into the national accounts, in order to eliminate major errors and accounting inconsistencies, giving rise to a database – the Integrated Business Accounts System.

- Different types of household and business surveys carried out by Statistics Portugal (namely, on the household side, the employment survey and the household expenditure survey, and on the business side, sectoral surveys such as the annual industrial production survey);

- Consumer, producer and international trade price indices, compiled by Statistics Portugal.

Filling in the SUT from these sources is not automatic, requiring the compiler to make judgements to establish, product by product, the balance between resources and uses. These judgements are necessary for several reasons:

- Conflicting sources: sometimes the information provided by two or more statistical sources is inconsistent, requiring a hierarchy of their relative value in terms of statistical quality (assessed by various criteria, such as representativeness, stability of information available, plausibility considering previous periods, clarity and rationality of explanations provided by respondents when questioned);

- Lack of information due to non-response or incomplete response in surveys and supporting databases (such as the one compiled from the SBI), leading to the need for imputing values, usually using information from companies with similar characteristics or technical relationships to be respected, for example between production and intermediate consumption.

The SUT is calculated simultaneously at current prices and previous year's prices, using a set of information on price changes, namely the consumer, producer and international trade price indices. In other words, SUT produces two important statistics: GDP at current prices (commonly known as nominal GDP) and GDP at the previous year's prices. The ratio between nominal GDP and nominal GDP of the previous year allows calculating the nominal or value variation of GDP.

However, users are generally more interested in a fourth piece of information: the real, or volume, change of GDP, as it reflects only changes in quantities of the main macroeconomic aggregates, eliminating the effect of price changes. This change is obtained by the ratio between GDP at previous year prices and nominal GDP of the previous year.

From the ratio between the nominal and real changes, a fifth important piece of information is calculated (but which rarely receives any media attention): the GDP deflator or implicit price index of GDP. The GDP deflator is an alternative and broader measure of inflation than the commonly used consumer price index (CPI) which, however, has the relative advantage of being available monthly.

Additionally, comparing the evolution of the GDP deflators across countries involved in international trade can provide indications of their relative competitiveness, particularly in a context of exchange rate stability.

In summary, annual series at current prices and the previous year prices allow calculating the rates of change in volume and the respective deflators. To enable direct calculation of volume growth rates, a procedure called ‘chain-linking’ can also be used, which converts the data into a chain-linked volume series, using a specific year as reference or base. Following the implementation of the 2021 base in Portuguese national accounts, the reference year for chain-linking was also changed to 2021 (replacing the previous reference of 2016). Thus, the chain-linked volume series results from applying these volume growth rates to annual data for 2021 at current prices for previous and subsequent years.

Annual national accounts published by Statistics Portugal, compatible with the current ESA 2010, are available since 1995. Quarterly national accounts are available from the first quarter of 1995, and quarterly sector accounts since the first quarter of 1999, in accordance with ESA 2010 transmission program requirements.

Moreover, Statistics Portugal and Banco de Portugal jointly produce the Long Time Series for the Portuguese Economy, providing retrospective annual data for various national accounts aggregates (financial and non-financial), mostly since 1953. These data are compiled according to the latest ESA version, ensuring the absence of conceptual breaks compared to previous versions.

GDP calculation may not end with the completion of the first version of the SUT. There is still a fundamental validation element to consider: the Institutional Sector Accounts.

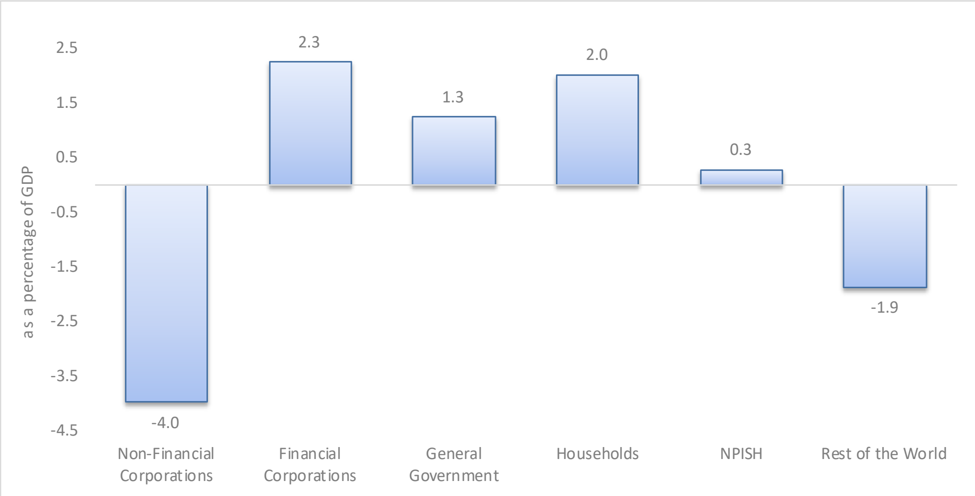
These accounts summarise the distribution and redistribution of income generated by economic activity, allowing the calculation of current savings of each domestic institutional sector (Non-Financial Corporations, Financial Corporations, General Government, Households, Non-Profit Institutions Serving Households) and the Rest of the World sector. For each institutional sector, current savings, plus net capital transfers received and minus gross capital formation expenditure, allow determining its net lending (if positive) or net borrowing (if negative)[4].

The sum of these final balances for the domestic sectors must necessarily correspond to the symmetrical figure for the Rest of the World (see chart below).

[4] In addition to these sectoral accounts produced by Statistics Portugal, Banco de Portugal compiles financial sectoral accounts. These accounts show how the financing capacities/borrowing of institutional sectors are reflected in financial applications in terms of assets and liabilities. Two examples: (i) a large part of the financing capacity that the household sector chronically exhibits is largely reflected in bank deposits; a large part of the General Government's financing borrowing is explained by the issuance of bonds and other debt securities.

Figure 1

NET LENDING(+) /BORROWING(-) BY INSTITUTIONAL SECTOR IN 2023



B) Quarterly national accounts

As a result of the smaller volume of available information and the need to produce results shortly after the end of the quarter (the first estimate is released up to 30 days later), the level of detail of the quarterly accounts is considerably lower than in annual accounts and the methodology used is also different.

As in most European countries, the Portuguese quarterly national accounts aggregates are estimated using indirect methods based on econometric models. In specific cases (e.g. exports and imports of goods and services), a 'quasi-direct' approach is used, since the quarterly series show small differences compared to annual accounts. Therefore, the compilation approach for quarterly accounts can be considered mixed, using both direct and indirect methods. It should be noted that the limited availability of quarterly information does not allow the use of the SUT.

Indirect methods exploit the correlations between each annual accounts aggregate with one or more logically associated indicators, available at least quarterly. In very simple terms, consider the following equation (in matrix notation):

$$y = X\beta + \varepsilon$$

Where y corresponds to a series of (unknown) quarterly estimates of given national accounts aggregate, X corresponds to the quarterly series of associated indicators, β is a vector of parameters and ε is a vector of residuals, not necessarily independent over time. To estimate this equation, the following restriction must be imposed:

$$\bar{y} = Cy$$

Where $\bar{y}$ corresponds to the observed annual value of the annual accounts aggregate and C is a matrix that converts quarterly values into annual values. In other words, to obtain quarterly accounts, the annual accounts are taken as the observed values that the quarterly accounts must reproduce. This explains why annual accounts are fundamental for producing quarterly accounts.

For example, to estimate quarterly final household consumption expenditure on durable goods excluding cars, the associated indicator used is the retail trade turnover index for this type of goods. This index is published monthly and results from an Statistics Portugal survey of a representative sample of companies. The observed values of this consumption correspond to those compiled in annual accounts.

Indirect methods solve two problems in estimating quarterly accounts: distribution (estimating quarterly figures when the annual total is known) and extrapolation of quarterly figures for periods where annual accounts are not yet available. Obviously, in the fourth quarter of each year, the aim is not only to obtain a quarterly result, but also to anticipate the annual result that annual accounts will later determine.

The following table shows, for the years with final annual accounts (i.e. accounts in which all the relevant basic information has already been used), the differences between annual results based on first estimates (flash estimates) from quarterly accounts and the annual accounts.

Table 1

ANNUAL GDP GROWTH RATE IN VOLUME (%)

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Quarterly National Accounts (Flash estimate)	1.5	1.4	2.7	2.1	2.0	-7.6	4.9	6.7	2.3
Annual National Accounts (final)	1.6	2.0	3.3	2.9	2.7	-8.2	5.6	7.0	3.1

Assuming that, due to the volume and stability of the base information used, annual accounts reflect economic activity more accurately, if quarterly accounts showed very significant discrepancies, their usefulness would be questionable—especially if discrepancies occurred not only in the magnitude of growth rates but also in their trend. Large discrepancies in magnitude and trend would transmit misleading signals to policymakers and economic agents.

To make extrapolation of annual data by quarterly accounts more efficient, whenever a new annual result becomes available, this new observation is incorporated into the econometric models, and consequently, the quarterly series may undergo more or less significant revisions. In other words, there is a price to pay for the relatively quick availability of quarterly GDP estimates: these figures tend to be subject to revisions.

In fact, there are three factors behind revisions of the quarterly accounts:

(i) As already mentioned, the availability of new annual observations means that the values initially calculated must be corrected;

(ii) The revision of associated indicators used (e.g., the retail trade turnover index is subject to revisions because companies correct responses or delay responses to the supporting survey);

(iii) The revision of seasonal adjustment and calendar effects coefficients, which will be addressed below.

Revisions naturally tend to decrease in importance as time goes on after the reference quarter, particularly after the incorporation of annual data for that same year or adjacent years.

One particular feature of quarterly accounts is that they include data adjusted for seasonal fluctuations and calendar effects. Seasonal fluctuations occur regularly throughout the year, affecting the behaviour of most macroeconomic variables. For example, tourism activity tends to decrease from the third to the fourth quarter. This result cannot be interpreted as reflecting a deterioration in the behaviour of this activity, as it largely or entirely reflects the change in season. Therefore, to properly assess the economic behaviour of key macroeconomic aggregates, it is necessary to eliminate the impact of these seasonal fluctuations.

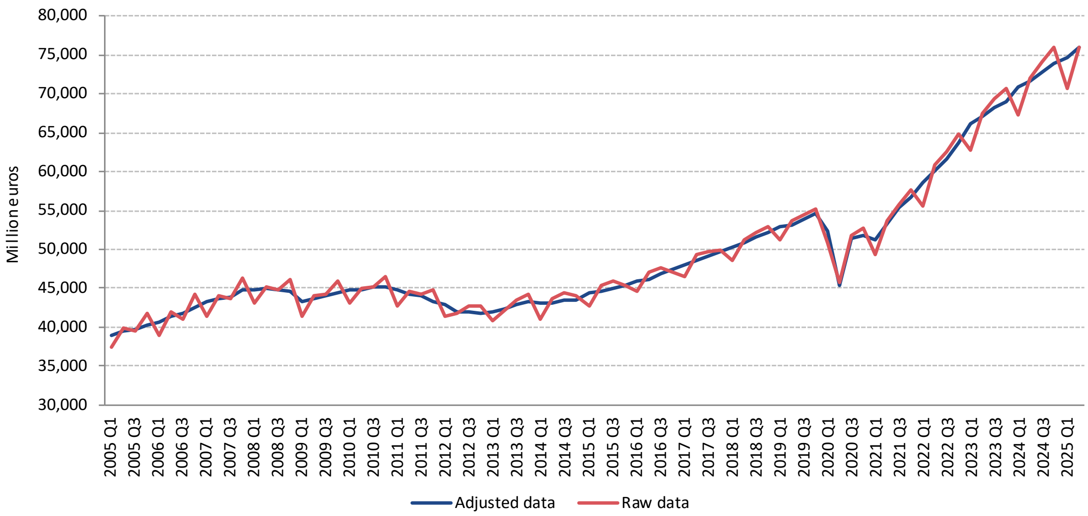
Additionally, calendar effects (variation in the number of working days and movable holidays) also tend to disturb the behaviour of economic series. Again, in the case of tourism, the possibility of Easter occurring in two different quarters in consecutive years makes it difficult to interpret year-on-year changes. Therefore, these effects are also treated in the production of quarterly accounts.

The result of this exercise is very important, as can be seen in the following chart, which represents two GDP series at current prices, adjusted series and non-unadjusted series for seasonality and calendar effects. It is important to note that GDP is not adjusted directly; rather it results from the aggregation of its components previously adjusted for seasonality and calendar effects. This result is obtained by using associated indicators adjusted for these two variability factors when estimating these components.

Figure 2

QUARTERLY GDP AT CURRENT PRICES

(DATA ADJUSTED FOR SEASONALITY AND CALENDAR EFFECTS AND NON-ADJUSTED DATA)



However, although it produces more interesting results for economic analysis, adjusting for seasonality and calendar effects also comes at a cost. These adjustments require the use of probabilistic time series models. As new observations are included, estimates for the coefficients of these models vary, making it necessary to revise the published series.

Quarterly accounts were published for the first time in 1992, with the series available from the first quarter of 1977. The transition from ESA 79 to ESA 95 occurred in 2000 and the quarterly accounts began to be published from the first quarter of 1995, with dissemination 120 days after the end of the reference quarter. From the publication of the fourth quarter of 2002, the deadline was reduced to 70 days. From the first quarter of 2007, Statistics Portugal also began to release the GDP flash estimate ,45 days after the reference quarter [5] . With the implementation of the ESA 2010, the publication deadline for quarterly accounts was reduced to 60 days, instead of the 70 days that applied until the regular estimates for the second quarter of 2014.

In 2020, in the exceptional context caused by the COVID-19 pandemic, the release of the first quarterly GDP estimate was brought forward from 45 to 30 days after the end of the quarter. This change, which had already been prepared in previous years, was implemented with the publication for the second quarter of 2020.

Thus, the dissemination of quarterly GDP information now occurs at three distinct moments, as recommended within the European Statistical System: 30 days (flash estimate), 60 days (detailed data) and 85 days (detailed data with breakdown by institutional sector) after the reference quarter.

Note that the flash estimates do not replace the more precise and detailed quarterly accounts, which are currently released 60 days after the end of the reference quarter. These flash estimates are calculated using the same methodology and as much as possible the same information as the regular quarterly accounts estimates. Although the proportion of information covered by the flash estimate is high, its results are subject to more significant revisions (compared to the regular estimate at 60 days). The following table illustrates the performance of the flash estimate in anticipating the regular estimate, with regard to the year-on-year and quarter-on-quarter rates of change in GDP (in volume). For this set of 20 quarters, the mean absolute deviation of the flash estimate is less than 0.1 percentage points (p.p.).

[5] Starting from the second quarter of 2008, INE began publishing quarterly non-financial institutional sector accounts. These accounts are presented in nominal terms and, in order to eliminate seasonal fluctuations and reduce the effect of irregular oscillations, the data are shown for the year ending in the reference quarter.
In addition to highlighting the contribution of each institutional sector to the economy’s output, they allow the calculation of current savings and the financing capacity/borrowing of each sector. They are made available up to 85 days after the end of the reference quarter.

Table 2
SEASONALLY ADJUSTED QUARTERLY GDP IN VOLUME
FLASH ESTIMATE VERSUS FIRST REGULAR ESTIMATE

Quarters	Year-on-year rate of change			Quarter-on-quarter rate of change		
	t+30 (%)	t+60 (%)	Revision (p.p.)	t+30 (%)	t+60 (%)	Revision (p.p.)
3Q 20	-5.8	-5.7	-0.1	13.2	13.3	-0.1
4Q 20	-5.9	-6.1	0.2	0.4	0.2	0.2
1Q 21	-5.4	-5.4	0.0	-3.3	-3.3	0.0
2Q 21	15.5	15.5	0.0	4.9	4.9	0.0
3Q 21	4.2	4.2	0.0	2.9	2.9	0.0
4Q 21	5.8	5.8	0.0	1.6	1.6	0.0
1Q 22	11.9	11.9	0.0	2.6	2.6	0.0
2Q 22	6.9	7.1	-0.2	-0.2	0.0	-0.2
3Q 22	4.9	4.9	0.0	0.4	0.4	0.0
4Q 22	3.1	3.2	-0.1	0.2	0.3	-0.1
1Q 23	2.5	2.5	0.0	1.6	1.6	0.0
2Q 23	2.3	2.3	0.0	0.0	0.0	0.0
3Q 23	1.9	1.9	0.0	-0.2	-0.2	0.0
4Q 23	2.2	2.2	0.0	0.8	0.8	0.0
1Q 24	1.4	1.5	-0.1	0.7	0.8	-0.1
2Q 24	1.5	1.5	0.0	0.1	0.1	0.0
3Q 24	1.9	1.9	0.0	0.2	0.2	0.0
4Q 24	2.7	2.8	-0.1	1.5	1.5	0.0
1Q 25	1.6	1.6	0.0	-0.5	-0.5	0.0
2Q 25	1.9	1.9	0.0	0.6	0.6	0.0

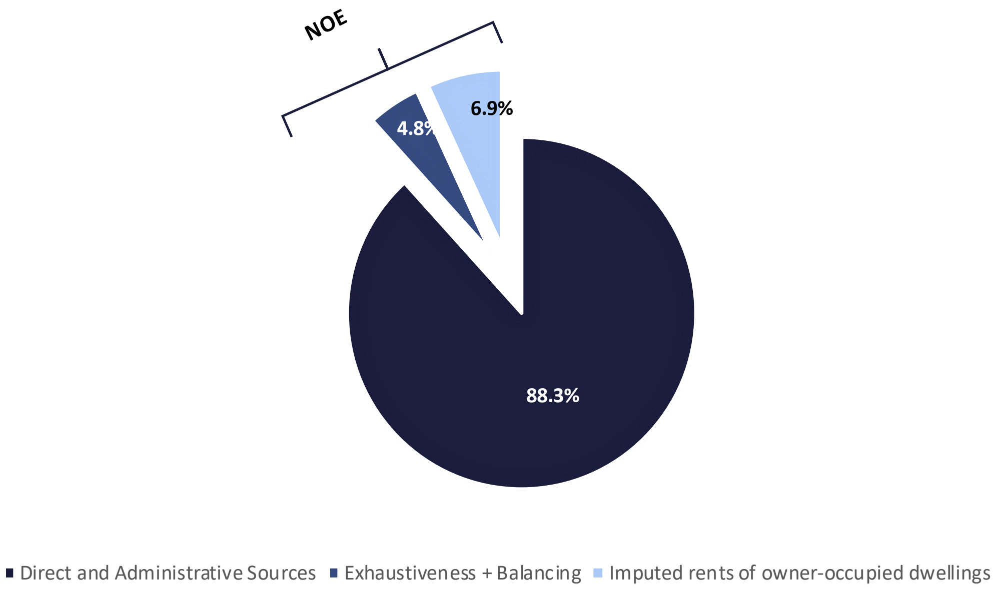
4. To what extent is GDP representative of economic activity?

One of the most popular criticisms of GDP is that it does not cover economic activity exhaustively. This criticism is based on the idea that some economic agents do not report or only partially report their activity, for various reasons, such as fear of undesirable tax consequences, lack of accounting records to support reporting, or involvement in illegal activities. For convenience, let us call all this set of insufficiently reported activities the Non-Observed Economy (NOE).

These criticisms seem to have some basis, but they are often made without understanding the process of compiling national accounts. In particular, GDP calculation does not rely solely on information directly reported by economic agents; there are imputation procedures that, at least partially, should cover the NOE. The following chart, based on GDP for 2021, from the 2021 national accounts benchmark, provides an idea of the relative size of NOE. A significant share corresponds to imputed rents for households that own their homes (primary and secondary residences), as previously mentioned. The second share, 'Exhaustiveness and Balancing' emerges mainly from the construction of the SUT. 'Balancing' refers to the adjustments that must be introduced in data from direct and administrative sources to establish the balance between resources and uses at the branch/product level of economic activity.

Figure 3

NON-OBSERVED ECONOMY (GDP FOR 2021 – BENCHMARK YEAR 2021)



Among the various adjustments made, one stands out: the so-called 'Additional Employment' in the jargon of national accounts compilers.

What does the 'Additional Employment consist of?

On the demand side of labour, there is a set of sources: SBI; sectoral surveys; Single Report - Staff Table, Social Balance Sheets and Social Security data, that provide an indication of the level of employment in the economy. On the supply side of labour, through the employment survey, another indication is obtained. The first, based on information from companies, covers what than be called structured employment; the second, based on information from households, also includes informal employment and generally points to a higher level of employment. It is this latter level that is taken as a reference for the national accounts. The difference between the two levels is then the "Additional Employment". This additional is distributed among the different branches of activity in the national accounts. Based on the average productivity per unit of labour, calculated by branch of activity for companies in the lowest strata of personnel employed (i.e. what is usually called micro-enterprises), production and intermediate consumption are imputed to the additional employment, and integrated into the SUT.

In addition to this adjustment, there is an additional set of procedures to ensure the exhaustiveness of GDP, particularly in the following areas:

- Remuneration in kind and tips;

- Own-account production of housing and major housing repairs;

- Production for own final use and self-consumption;

- Imports and exports below the Intrastat[6] declaration threshold.

Measuring economic activity faces increasingly complex challenges, which have motivated studies and profound revisions of statistical systems. One topic that has received particular attention is the accounting of illegal activities in GDP. For this purpose, national accounts compilers have developed methodologies to measure the volume of production associated with illegal activities. Naturally, the main difficulty these studies seek to overcome is the lack of relevant information to apply the typical tools of national accounts. Thus, indirect methods are used, based on potentially related information and more or less substantiated assumptions about the typical behaviour of agents representing these activities. Following the implementation of the ESA 2010 in 2014, these activities were incorporated into GDP. The results obtained for the various EU Member States corresponded to values that were not very significant and far below generally expected levels.

In recent years, the discussion about the shortcomings of the information content of GDP has focused on the following aspects:

- GDP volume growth does not reflect social progress and changes in well-being;
- GDP is not adjusted for the destructive impact on the environment caused by economic activity;
- The growing weight of services in the structure of the economy makes it difficult to identify the contribution of each of the two components in changes in value: the change in volume and the change in price;
- Globalisation is making it increasingly difficult to draw up national accounts, particularly regarding the association between economic activity and the territory in which it takes place;
- Transactions in crypto-assets, for which there is very little information on a global scale and even less on a national scale;
- The phenomena of the collaborative economy and the digitalisation of economies are associated with new activities that are generally not explicitly included in national accounts.

In this context, the discussions on the SNA provide the basis for periodic and in-depth reassessment of the concepts, methods and statistical sources used to measure economic activity. These revisions give rise to new generations of accounting systems that are more aligned with economic, social, technological and environmental transformations.

A notable example of this conceptual evolution occurred with the SNA 2008, when research and development ceased to be considered an intermediate consumption expenditure and was included inf Gross Capital Formation, assigning it the role as a productive investment.

[6] Intrastat corresponds to the information flows on transactions of goods between the Member States of the European Union.

The new version of the SNA was approved by the UN Statistical Commission in March 2025. The SNA 2025 introduces significant changes, which can be grouped into three main areas:

- Sustainability and well-being: inclusion of metrics that go beyond GDP, covering environmental, social and quality-of-life factors.
- Digitalisation: adapting to the new realities of the digital economy, such as intangible assets, digital platforms, crypto-assets and data flows.
- Globalisation: improved representation of global value chains, multinational companies and cross-border transactions.

In parallel, the Balance of Payments Manual (BPM7) also updated in March 2025. This update aims to ensure consistency among the main international statistical systems and reflect the new dynamics of global financial and trade flows.

In collaboration with national statistical authorities in the European Statistical System (ESS), Eurostat is working to revise ESA 2010 to bring them in line with the new international manuals, the SNA 2025 and BPM7.

ESA 2010 will remain in force until 2030, when the coordinated implementation of the new ESA and BPM7 across EU countries is expected to take place.