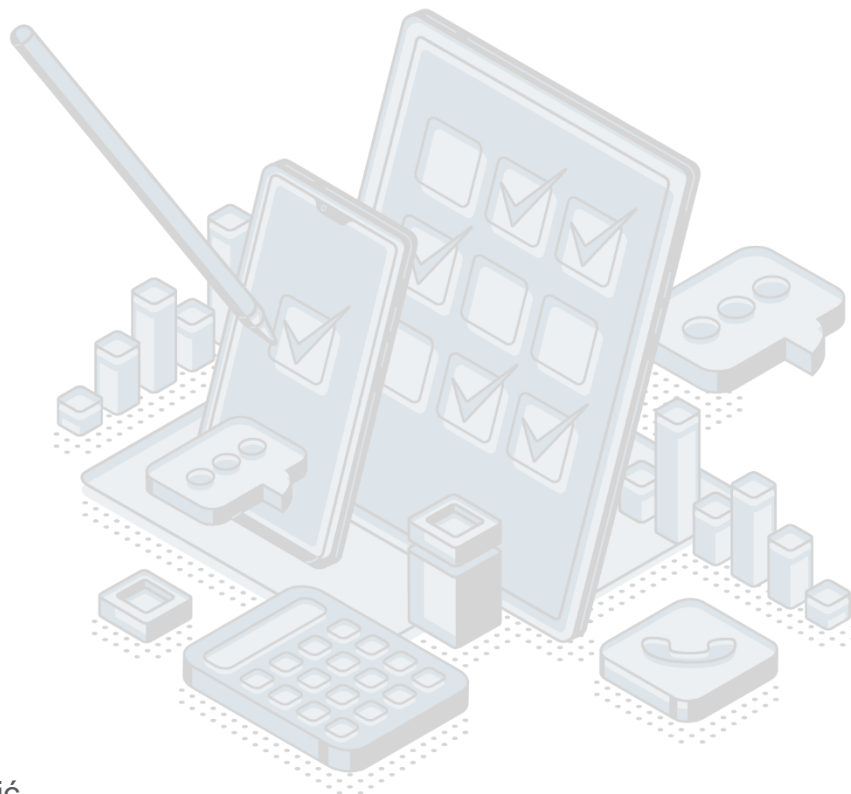


QUALITY REPORT

Purchasing power parities 2024



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1. Introduction – Basic information about the survey

1.1 Purpose, goal and subject of the survey

Purchasing Power Parity (PPP) is an effective tool for cross-country comparisons of gross domestic product (GDP). Since it includes the price influence, it provides one of the most accurate indicators of the economic situation in a country. Purchasing Power Parities (PPPs) are currency conversion rates used to convert economic indicators from national currency into an artificial common currency called the Purchasing Power Standard (PPS). PPS equalizes the purchasing power of different national currencies and enables meaningful volume comparison between countries.

The Purchasing Power Standard (PPS) is an artificial currency unit that eliminates price level differences between countries. One PPS buys the same volume of goods and services in all countries, allowing for meaningful volume comparison of economic indicators across countries. The greatest impact on GDP per capita measured in PPS, has the size of GDP estimated using the expenditure method, the level of consumer prices and population size.

1.2 Legal basics

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12) defines provisions for collection, processing, and dissemination of data. The Law provides to the Statistical Office clear and wide legal powers to collect and access the data necessary for the implementation of Programme and Annual Plan. The Law gives a priority to the use of administrative data and right of access to individual data that are a result of survey of other official statistical producers. As an annex to legal provisions, Statistical Office has signed several memoranda on cooperation with administrative data providers.

The common rules for the provision of basic information (input data), the calculation and dissemination of PPPs are laid down in Regulation (EC) No 1445/2007 of the European Parliament and of the Council of 11 December 2007.

1.3 Statistical units

PPPs are calculated for each of the participant countries in European comparison program, for the EU as a whole, and for the euro area. There is no regional breakdown.

1.4 Coverage and scope of survey

1.4.1 Sectors

PPPs are calculated for GDP and its various sub-aggregates on the expenditure side of national accounts.

1.4.2 Statistical population

The expenditure side of national accounts, as defined in ESA 2010, defines the statistical population.

1.5 Referent geographical area

Eurostat is in charge for annual calculation and dissemination of PPPs. This includes the 27 EU Member States, the United Kingdom, 3 EFTA Member States (Iceland, Norway and Switzerland) and 9 candidate countries (Turkey, North Macedonia, Montenegro, Serbia, Albania, Bosnia and Herzegovina, Moldova, Ukraine and Georgia). Each participating country collects a sufficient number of prices for each of the selected products and services, in order to ensure a reliable average price per product and service, taking into account the market structure in the country. Prices are collected in capital city in shops which are representative for a specific group of products and they represent national average prices.

1.6 Concepts and definitions

Purchasing power parities (PPPs) are a method of converting national currencies into a common currency that equalizes the purchasing power of different national currencies. This means that a certain amount of national currency is converted into another common currency by purchasing power parity, corresponding to the amount needed to purchase the same basket of goods and services in all countries.

In the simplest form, PPPs represent the ratio of the prices of certain products and services in national currencies between countries. For example, we know that today a certain amount of money buys fewer goods than we could buy for the same amount a month ago, and of course much less than a year or several years ago. Purchasing power of 1 euro is lower due to price increases. In other words, the same amount of purchasing power is reduced because the price level for the products and services we bought today, is higher than a few months, year or several years ago. In the simplest form, PPPs is the ratio of the prices of individual products and services in national currencies between countries.

1.7 Classifications

PPPs are produced in accordance with the final expenditure classification of the European Standard of Accounts (ESA '2010). PPPs are classified by type of final expenditure - actual individual consumption expenditure (AIC), actual collective consumption expenditure and capital expenditure - and, in the case of actual individual consumption expenditure, by purchaser – households (HAICP), non-profit institutions serving households (NPISHs) and general government. The prices underlying the calculation of PPPs follow the definitions, concepts, classifications and accounting rules of ESA.

1.8 Frequency of data collection

Price collection is a continuous process and is carried out as follow:

1. Household consumption - contains six surveys covering different components of household consumption, conducted over a three-year cycle (two surveys per year).
 - I survey: Food, drink and tobacco;
 - II survey: Personal appearance;
 - III survey: House and garden;
 - IV survey: Transport, hotels and restaurants;
 - V survey: Services;
 - VI survey: Furniture and health.
2. Government consumption - This includes an annual survey of the compensation of public sector employees as well as an annual education database.
3. Gross fixed capital formation - Surveys on equipment goods are conducted every second year, while the construction survey has been carried out annually since 2010. Expenditure weights and auxiliary data are reported on an annual basis.

1.9 Frequency of data dissemination

The data are published twice a year.

1.10 Methodology

The latest version of the 'EUROSTAT-OECD Methodological Manual on Purchasing Power Parities' is available online: [PPP Methodology](#)

1.11 Base period

Not relevant.

1.12 Unit of measure

PPPs can be interpreted as the exchange rates of countries national currencies against the PPS. They express the number of currency units per PPS. Real expenditures are expenditures in national currency converted to PPS using PPPs. They are thus denominated in PPS.

PLIs and volume indices per capita are indices that, in Eurostat's database, use EU27_2020, EU28, EU27 or EU15 as "base country" (EU27_2020=100, EU28=100, EU27=100 or EU15=100, depending on the user's choice).

1.13 Data source

For surveys conducted within the framework of consumer goods and services, the data sources include retail stores (mini-markets, supermarkets, kiosks, and specialty stores), entrepreneurs, public enterprises, the internet, CPI, and others. Prices are collected in the capital and its surrounding areas. Data collection takes place over a period of three years, across six separate surveys, with two surveys conducted per year.

Services produced by the general government are considered non-market services and, as such, do not have economically significant market prices. Since market prices are unavailable, the standard practice is to value non-market services in national accounts at cost, or based on input prices. This convention is also applied in the calculation of PPPs for collective services provided by the government. Countries report employee compensation, including social contributions, for a sample of occupations within these collective services. These compensation figures are then used in the PPP calculations as price estimates for government-provided collective services.

Housing receives special treatment. In most of the countries, a survey of actual rentals is carried out annually. Depending on the data we have, there are two approaches used to compare rents and expenditures for this purpose: price approach and quantitative approach.

For education services, an approach based on direct estimation of volumes (number of students relative to total population) with quality adjustment based on the PISA survey is used.

For investment goods and services, two surveys are conducted: one for machinery and equipment, carried out once every two years, and one for construction, carried out annually. Prices for equipment goods are obtained from producers, importers, distributors or actual purchasers. Prices for construction are collected using a set of standard construction projects, covering different types of buildings and civil engineering works.

1.14 Method of data collection

For the purposes of prices collecting MONSTAT engage interviewers (price collectors). Price collectors receive instructions from project coordinators regarding data collection, along with a detailed list of specified products and a list of representative stores where price collection will be carried out. The methods used for price collection vary and depend on the types of product or service (telephone interview, websites or special surveys). The price survey for construction projects is a special case, and required an external construction experts to conduct the survey and provide price estimates for the selected sample of construction projects. The same approach applies to the equipment goods survey. Data on rents and the employee compensation are usually obtained from existing sources within the institution or from other government agencies.

2. Relevance – Data users

2.1 User needs

International users:

- ✚ Eurostat;
- ✚ World Bank;
- ✚ UN organizations;
- ✚ International Monetary Fund .

National users:

- ✚ Ministries and other public administration bodies;
- ✚ Local government and other local government bodies;
- ✚ Central bank;
- ✚ Non-governmental organizations;
- ✚ Students;
- ✚ Researchers;
- ✚ Media.

2.2 User satisfaction

The Statistical Office has adopted the Quality Management Strategy, the Guidebook to the Implementation of the Quality Management Strategy, as well as the Plan for the Implementation of the Quality Policy. In order to measure the degree to which fulfills obligations towards users and within the new quality policy, the Statistical Office conducted User satisfaction survey.

The results of the survey are available on the Statistical Office website, at the following link:

[User satisfaction](#)

3. Accuracy and reliability

3.1 Accuracy – Overall remark

The precision of PPPs increases with the level of aggregation. This means that the PPP at GDP level will be more reliable, or precise, than the PPP for final household consumption or gross capital formation. Similarly, the PPP for final household consumption will be more reliable than the PPP for "food and non-alcoholic beverages", or "clothing and footwear", the latter two being sub-aggregates of final household consumption.

The input data into the PPP compilation process comes from several sources, specifically, from special PPP price surveys and from national accounts. This makes it impossible to calculate any meaningful, numerical measure of error margins for PPPs.

3.2 Sampling error

The survey is not based on a random sample, so we cannot use standard approaches to assess a sample error.

Indicators of sampling error

Not available.

3.3 Non-sampling error

In the consumer goods surveys, measurement errors can occur due to non-compliance with the strict definition of the products in the product sample, for instance with regard to package sizes or quality parameters. While the validation process aims at eliminating these errors by carefully comparing the price material provided by each country and evaluating its plausibility, some of these errors can be hard to identify, especially those related to quality. Similar problems can occur in other surveys as well, like the annual survey on compensation of public sector employees. Here, the problem stems from the heterogeneous data sources across countries.

3.3.1 Coverage error

Not available.

Indicator of coverage error

Not available.

3.3.2 Measurement error

Measurement errors are only possible in the phases of collecting or entering data by price collectors or by persons who enter the data. Questionnaires and methodological instructions were provided to price collectors and with regular interactive communication with them we are trying to minimize the errors. Possible recording and entry errors are corrected during validation phase, so subsequent revisions were not carried out.

3.3.3 Non-response error

Not available.

Non-response rate

Not available.

Unresponded unit rate

Not available.

3.3.4 Processing error

Not available.

Inputation rate

Not available.

3.4 Seasonal adjustment

Not relevant

3.5 Data revision

3.5.1 Data revision policy

Statistical Office has adopted the revision policy and it is available on the website: [Revision policy](#)

Revision of PPP data is defined by Eurostat's revision policy.

3.5.2 Data revision practice

In order to obtain the highest level of coherence with national accounts, in December 2016, after the introduction of ESA 2010, a complete series of PPP data was revised.

3.5.3 Data revision - average size

Not available.

4. Timeliness and punctuality

4.1 Timeliness

EUROSTAT publishes the results on PPP and GDP in PPS annually.

For the same reference year (t) both sets of the results are regularly produced and published four times:

- After t+6 months: First preliminary results, based on extrapolations from year t-1 and on the new data for year t that are available at that time;
- After t+12 months: Preliminary results, incorporating all new price and expenditure data of year t;
- After t+24 months: Revised, preliminary results, incorporating the most recent expenditure estimates;
- After t+36 months: Final results for year t. These results are "final" in the sense that there will be no further updates when countries revise their National Accounts estimates.

Time lag of the first results

reference period (t)	first preliminary results (t+6)	preliminary results (t+12)	Revised, preliminary results (t+24)
2024	Jun-2025	Dec-2025	Dec-2026

Time lag of the final results

reference period (t)	final results (t+36)
2024	Dec-2027

4.2 Punctuality

PPPs are always published in June and December in accordance with the Statistical Release Calendar of MONSTAT for 2024 which is in line with EUROSTAT release calendar.

5. Availability and clarity

5.1 Statistical Release Calendar

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12) stipulates that official statistical producers prepare, update, and publish Statistical Release Calendar. It is published on the website of Statistical Office not later than 20 December for the next year, for all official statistical producers that includes date of releasing statistical data. Any change in date of releasing in the Calendar is published in advance in accordance with the Procedure on Unplanned Revisions.

First estimates of PPPs and related indicators for the preceeding year are released in the form of a press release in June each year. In December, these indicators are recalculated for the three preceeding years. MONSTAT publishes the results after they are released by Eurostat.

5.2 Access to data Release calendar

Statistical Release Calendar is available on the following link: [Release calendar](#)

5.3 Releases

EUROSTAT publishes two annual releases in June and December each year:

Gross Domestic Product and Actual Individual Consumption per capita in PPS and Price Level Indices for household final consumption expenditure.

After official release by Eurostat, MONSTAT publishes a compilation of above mentioned press releases which are available at the following link: [Releases](#)

5.4 Publications

All publications published by Statistical Office are available at the following link: [Publications](#)

5.5 Online database

The PPP domain of Eurostat's database can be accessed under "Economy and finance"- "Prices" - "Purchasing power parities": <http://ec.europa.eu/eurostat/data/database> Press releases published by MONSTAT can be found on the website:

[Eurostat database](#)

5.6 Access to micro data

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12) regulates rules under which external users can obtain an access to individual data for needs of research. Article 58 defines types of scientific and research organizations that can obtain such data. Providing individual data without identifier is possible only upon a written request of scientific and research institutions, with purpose of performing scientific and research activities as well as international statistical organizations and statistical producers from other countries. Research entity signs the agreement with Statistical Office, and it signs the statement on respecting the confidentiality principle. Official statistical producers keep a separate record on users and purpose of using the statistical data given to these users.

5.7 Metadata completeness rate

Not available.

6. Comparability

6.1 Comparability - geographical

PPPs are primarily spatial price level indicators, and the comparability of the results across countries can be assumed to be very good.

6.2 Comparability - over time

PPPs are spatial price level indicators, and thus primarily suitable in comparisons referring to several geographical locations at a given point in time. Unlike the item sampling and price collection that underlie consumer price indices, the sampling of items and the price collection for PPPs are not designed to capture price changes over time, but rather price differences across countries or other geographical units. If necessary, product samples will be changed between two consecutive surveys in order to maintain or improve comparability across countries.

Nevertheless, PPPs and PPP-based indicators may be used in inter-temporal comparisons under certain circumstances, provided that the results are interpreted with sufficient care.

Time comparability indicator

Not available.