

EUROPEAN COMPARISON PROGRAMME

Methodological notes 2015

I. Essence of the European Comparison Programme (ECP)

The scope of this programme covers a work area in the current Statistical Programme of the European Commission “*Measuring differences in the price levels of goods and services between countries and between specific places*”.

Since the EU=1 is used as a base, the European currency – EURO, is adopted as common numeraire. To obtain a pure comparison of volumes for the ECP purposes, it is, therefore, essential to use specific conversion rates (spatial deflators), which remove the effect of price level differences between countries and show how much national money one has to spend to buy a well defined basket of comparable and representative goods and services as was what basket of comparable products one euro can buy in ECP partner countries. Purchasing Power Parities (PPP) are such currency conversion rates, which measure the ratio of the prices in national currency of the same good or service in different countries. By nature PPPs are price relatives at a given moment in territorial aspect which equilibrate the purchasing power of different national currencies. Being standardized towards the base EU=1 they are applied to convert the value indicators to an artificial common currency unit called Purchasing Power Standard (PPS).

Principal legal basis for this work:

1. REGULATION (EC) No 1445/2007 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2007 establishing common rules for the provision of basic information on Purchasing Power Parities and for their calculation and dissemination,
2. COMMISSION REGULATION (EU) No 193/2011as of 28 February 2011 implementing Regulation (EC) No 1445/2007 of the European Parliament and of the Council as regards the system of quality control used for Purchasing Power Parities
3. COMMISSION REGULATION (EU) 2015/1163 of 15 July 2015 implementing Regulation (EC) No 1445/2007 of the European Parliament and of the Council as regards the list of basic headings used for Purchasing Power Parities
4. Council Regulations on the Structural Funds (Reg. 1260/99, 1267/99) and the EC Staff Regulations (Reg. 3830/91).

The tasks contain regular comparable data production in order to establish volume deflators for GDP as a part of the Structural Funds allocation process.

The aim of the European Comparison Programme (ECP) is annual comparisons, between partners' countries, of the following indicators:

1. Purchasing power Parities (PPPs)
2. Price levels.
3. Volume measures of Gross Domestic Product (GDP), Actual individual consumption (AIC) and Gross fixed capital formation (GFCF)

PPPs are calculated on the basis of real market prices of selected representative goods (consumer and investment) and services. For the price collection, an international basket of comparable items is used. For selecting goods and services **two main principles** should be observed:

1. to be representative of the whole range of consumer goods and services consumed by households and of investments goods used for fixed capital formation as well;
2. to be representative of consumption patterns in the various countries participants in ECP.

II. Main definitions

Purchasing Power Parities (PPPs) are rates of currency conversion that convert value indicators from national into a common currency. The expenditures on GDP for different countries converted into a common currency by means of PPPs are comparable and reflect only differences in the volume of goods and services purchased. The original PPPs are expressed in a standardized form to the base (EU-28 = 1), so called Purchasing Power Standard (PPS) i.e. EURO in real terms (artificial 'average' currency).

Price level indices (comparative price levels) provide a measure of the differences in price levels between countries by indicating for a given GDP component the number of units of the common currency needed to buy the same volume of goods and services in each country compared with the base EU-28. The price level indices are calculated as a ratio between PPPs and the respective exchange rates (national currency/EUR) for each country, in relation to the EU average.

Per capita GDP in real terms (in PPS) is generally accepted as a quantification of the overall economic performance of countries compared with EU 28=1 or with other partner countries via EU.

Volume indices of per capita real GDP reflect only differences between partner countries in the volume of goods and services finally consumed i.e. the impact of the national prices of each country is eliminated. They are calculated by dividing the national final GDP expenditure, converted into a common currency by means of PPS, by the EU-28 average real final GDP expenditure. These indices are not intended to rank countries strictly. It is preferable to use them for dividing countries into groups of a comparable level of per capita real GDP.

Final consumption expenditure of households and non-profit institutions serving households (NPISHs) consists of expenditure incurred by households and by NPISHs on consumption goods and services.

Actual final consumption consists of final consumption expenditure of households and that of NPISHs plus individual consumption goods and services provided by general government free or at prices that are not economically significant e.g. in the field of education, health care.

For analytical purposes the most recommended applications of recalculated and extrapolated data are the comparisons of indicators across countries at a given point of time. The over time analysis and comments for a given country should be avoided.

The partner countries in ECP may publish the comparison results only after their official release by Eurostat/OECD.

III. Organization of the price surveys of goods and services representatives

Within the ECP Eurostat calculates PPPs for 28 member states, 6 Balkan countries and 3 EFTA members in accordance with Eurostat-OECD Methodological Manual on Purchasing

Power Parities, edition 2012.

Data provided by NSI to Eurostat needed for PPP calculation:

- Market prices for consumer goods/services representatives included in the product lists are very well defined with relevant physical characteristics
- Prices for investment goods (machinery and construction)
- GDP expenditure weights by basic heading breakdown
- Rents, quantity and quality information about dwelling stock
- Salaries for selected occupations in non-market services
- Official exchange rates
- Tips for selected services; VAT for investment goods
- Annual average population

Friquency of the national statistical data regarding PPP calculation delivery:

- Annually
 - Consumer goods and services (spring and autumn) – 3-annual cycle
 - Hospital services
 - Bills of quantities for construction projects
 - Other statistical information:
 - ✓ Final expenditure on GDP by 250 basic headings
 - ✓ Rents
 - ✓ Salaries
 - ✓ Consumer price indice (CPI)
 - ✓ Spatial adjustment factors (SAFs)
- Every second year:
 - Machinery and equipment

IV. Presentation of the results

Eurostat is able to provide fully comparable results for the 37 countries participating in the ECP only after full 3-years survey cycle is finished.

1. Scaling the basic heading level parities to EURO

The final data of the survey represent parities calculated using a matrix according to the EKS (Elteto-Koves-Szulc) method of multilateral aggregation between the parities of all 37 participant countries at the basic heading level. With the EKS method, countries are treated as a set of independent units and each country is assigned an equal weight. These parities are then standardized and scaled to the geometric mean of the exchange rates to the EURO of the participant countries. This scaling has no impact on the relativities between countries.

2. Aggregated results

The aggregated results are obtained by the usual method for calculation of binary parities using the Laspeyres/Paasche/Fisher formula. In order to derive parities that are transitive i.e. the parity of a given country to be directly comparable with the parity of each other country participating in the comparison EKS procedure is applied.

The parities at aggregate level are scaled in such a way that the sum of GDP in EURO of the 27 EU Member States equals its value in purchasing power standard:

$$\Sigma \text{ GDP for EU-27 in EURO} = \Sigma \text{ GDP for EU-27 in PPS}).$$

After the results are approved by 37 partner countries for year **T** they are published by Eurostat following the agreed timetable:

- **T + 6 months – Nowcast** (first preliminary results)
- **T + 12 months – preliminary results** based on preliminary price and weights data
- **T + 24 months – final results** based on final price and weights data

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