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(Acts adopted under the EC Treaty/Euratom Treaty whose publication is obligatory)

REGULATIONS

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

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 285(1) thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Economic and Social Committee ⁽¹⁾,

Acting in accordance with the procedure laid down in Article 251 of the Treaty ⁽²⁾,

Whereas:

- (1) In order to obtain a direct comparison of Gross Domestic Product (GDP) in volume terms between Member States, it is essential for the Community to have Purchasing Power Parities (hereinafter referred to as 'PPPs') which eliminate the differences in the level of prices between Member States.
- (2) The Community PPPs need to be produced in accordance with a harmonised methodology, consistent with Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community ⁽³⁾ which lays down a framework for the construction of national accounts in the Member States.

- (3) Member States are encouraged to produce data for regional PPPs.

- (4) Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund ⁽⁴⁾ provides that the regions eligible for funding from the Structural Funds under the convergence objective are to be regions corresponding to level 2 of the common classification of territorial units for statistics within the meaning of Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS) ⁽⁵⁾. The GDP per capita of such regions, measured in PPPs and calculated on the basis of Community figures for the period 2000 to 2002, is less than 75 % of the average GDP of the EU-25 for the same reference period. In the absence of regional PPPs, national PPPs should serve to establish the list of regions which could benefit from the Structural Funds. National PPPs can also be used to determine the amount of funds to be allocated to each region.

- (5) Regulation (EC) No 1083/2006 provides that the Member States eligible for funding from the Cohesion Fund are to be those whose gross national income (GNI) per capita, measured in PPPs and calculated on the basis of Community figures for the period 2001 to 2003, is less than 90 % of the average GNI of the EU-25 and which have a programme for meeting the economic convergence conditions referred to in Article 104 of the Treaty.

⁽¹⁾ OJ C 318, 23.12.2006, p. 45.

⁽²⁾ Position of the European Parliament of 26 April 2007 (not yet published in the Official Journal) and Council Decision of 13 November 2007.

⁽³⁾ OJ L 310, 30.11.1996, p. 1. Regulation as last amended by Regulation (EC) No 1267/2003 of the European Parliament and of the Council (OJ L 180, 18.7.2003, p. 1).

⁽⁴⁾ OJ L 210, 31.7.2006, p. 25. Regulation as amended by Regulation (EC) No 1989/2006 (OJ L 411, 30.12.2006, p. 6).

⁽⁵⁾ OJ L 154, 21.6.2003, p. 1. Regulation as last amended by Commission Regulation (EC) No 105/2007 (OJ L 39, 10.2.2007, p. 1).

- (6) Article 1 of Annex XI to the Staff Regulations of officials of the European Communities, laid down in Regulation (EEC, Euratom, ECSC) No 259/68 of the Council ⁽¹⁾ (hereinafter referred to as 'Staff Regulations') provides that, for the purposes of the review provided for in Article 65(1) of the Staff Regulations, the Commission (Eurostat) are to draw up every year before the end of October a report on changes in the cost of living in Brussels, the economic parities between Brussels and certain places in the Member States, and changes in the purchasing power of salaries in national civil services in central government.
- (7) Every year the Commission (Eurostat) already collects basic information on PPPs from the Member States on a voluntary basis. This operation has become an established practice in the Member States. However, a legal framework is necessary to ensure the sustainable development, production and dissemination of PPPs.
- (8) Provision of preliminary results on a regular basis, as is currently the practice, should be maintained in order to keep the most recent possible figures available.
- (9) The measures necessary for the implementation of this Regulation should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission ⁽²⁾.
- (10) In particular, power should be conferred on the Commission to adapt the definitions, to adjust the basic headings in Annex II and to define quality criteria. Since those measures are of general scope and designed to amend non-essential elements of this Regulation, inter alia by supplementing it with new non-essential elements, they must be adopted in accordance with the regulatory procedure with scrutiny laid down in Article 5a of Decision 1999/468/EC.
- (11) Since the objective of this Regulation, namely the establishment of common rules for the provision of basic information on purchasing power parities and for their calculation and dissemination, cannot be sufficiently achieved by the Member States and can therefore be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve that objective.
- (12) The Statistical Programme Committee, established by Council Decision 89/382/EEC, Euratom ⁽³⁾, has been consulted in accordance with Article 3 of that Decision,

HAVE ADOPTED THIS REGULATION:

Article 1

Objective

The objective of this Regulation is to establish common rules for the provision of basic information on PPPs, and for their calculation and dissemination.

Article 2

Scope

1. The basic information to be provided shall be those data necessary to calculate and ensure the quality of PPPs.

That basic information shall include prices, GDP expenditure weights and other data listed in Annex I.

Data shall be collected with the minimum frequency provided for in Annex I. More frequent collection of data shall take place only in exceptional and justified circumstances.

2. PPPs shall be calculated from the national annual average prices of goods and services, using basic information relating to the economic territory of the Member States as provided for by the European system of national and regional accounts in the Community (hereinafter referred to as 'ESA 95').

3. PPPs shall be calculated in accordance with the basic headings as listed in Annex II, consistent with the related GDP classifications defined in Regulation (EC) No 2223/96.

Article 3

Definitions

For the purpose of this Regulation the following definitions shall apply:

- (a) 'Purchasing Power Parities' ('PPPs') shall mean spatial deflators and currency converters that eliminate the effects of the differences in price levels between Member States thus allowing volume comparisons of GDP components and comparisons of price levels.
- (b) 'Purchasing Power Standard' ('PPS') shall mean the artificial common reference currency unit used in the European Union to express the volume of economic aggregates for the purpose of spatial comparisons in such a way that price level differences between Member States are eliminated.
- (c) 'Prices' shall mean the purchaser prices paid by the final consumers.

⁽¹⁾ OJ L 56, 4.3.1968, p. 1. Regulation as last amended by Regulation (EC, Euratom) No 1895/2006 (OJ L 397, 30.12.2006, p. 6).

⁽²⁾ OJ L 184, 17.7.1999, p. 23. Decision as amended by Decision 2006/512/EC (OJ L 200, 22.7.2006, p. 11).

⁽³⁾ OJ L 181, 28.6.1989, p. 47.

- (d) 'Expenditure weights' shall mean the shares of expenditure components in current-price GDP.
- (e) 'Basic heading' shall mean the lowest level of aggregation of items in the GDP breakdown for which parities are calculated.
- (f) 'Items' shall mean goods or services precisely defined for use in price observation.
- (g) 'Actual and imputed rentals' shall have the meaning attributed to it in Commission Regulation (EC) No 1722/2005 ⁽¹⁾.
- (h) 'Compensation of employees' shall have the meaning attributed to it in Regulation (EC) No 2223/96.
- (i) 'Temporal adjustment factors' shall mean factors used to adjust average prices obtained at the time of survey to annual average prices.
- (j) 'Spatial adjustment factors' shall mean factors used to adjust average prices obtained from one or more locations within the economic territory of a Member State to national average prices.
- (k) 'Representative items' shall mean those which are, or are considered to be, in terms of relative total expenditure within a basic heading, among the most important items purchased in national markets.
- (l) 'Representativity indicators' shall mean markers or other indicators identifying those items that Member States have selected as representative.
- (m) 'Equi-representativity' shall mean a property required of the composition of the item list for a basic heading, each Member State being able to price that number of representative products which is commensurate with the heterogeneity of the products and price levels covered by the basic heading and its expenditure on the basic heading.
- (n) 'Transitive' shall mean the property whereby a direct comparison between any two Member States yields the same result as an indirect comparison via any other Member State.
- (o) 'Mistake' shall mean a use of incorrect basic information or an inappropriate application of the calculation procedure.
- (p) 'Reference year' shall mean a calendar year to which specific annual results refer.

⁽¹⁾ Commission Regulation (EC) No 1722/2005 of 20 October 2005 on the principles for estimating dwelling services for the purpose of Council Regulation (EC, Euratom) No 1287/2003 on the harmonisation of gross national income at market prices (OJ L 276, 21.10.2005, p. 5).

- (q) 'Fixity' shall mean that when results are calculated originally for a group of Member States and then later the results are calculated for a wider group of Member States, the PPPs between the original group of Member States shall nevertheless be preserved.

Article 4

Roles and responsibilities

1. The Commission (Eurostat) shall be responsible for:
 - (a) coordinating the provision of the basic information;
 - (b) calculating and publishing PPPs;
 - (c) ensuring the quality of PPPs, in accordance with Article 7;
 - (d) developing and communicating methodology, in consultation with the Member States;
 - (e) ensuring that the Member States have the opportunity to comment on PPP results prior to publication and that due account be taken of any such comment; and
 - (f) drafting and disseminating the methodological manual referred to in point 1.1 of Annex I.
2. Member States shall follow the procedure set out in Annex I when providing basic information.

Member States shall provide written approval of the survey results for which they are responsible, once the process of data validation has been completed, as specified in point 5.2 of Annex I, within a period of no longer than one month.

Member States shall approve the data collection methodology and check the plausibility of data, including items of basic information provided by the Commission (Eurostat).

Article 5

Transmission of basic information

1. Member States shall transmit the basic information listed in Annex I to the Commission (Eurostat) in accordance with the existing Community provisions on transmission of data.
2. The basic information listed in Annex I shall be transmitted in the technical format and within the time periods specified in that Annex.
3. In cases where items of basic information are supplied to Member States by the Commission (Eurostat), the Commission shall transmit a method statement to enable the Member States to conduct a plausibility check.

*Article 6***Statistical units**

1. The basic information listed in Annex I shall be obtained either from statistical units as defined in Council Regulation (EEC) No 696/93 ⁽¹⁾ or from other sources which yield data meeting the quality requirements specified in point 5.1 of Annex I. Each Member State shall notify the type of the statistical unit or source to the Commission when transmitting the data.

2. The statistical units called upon by the Member States to provide data or to cooperate in data collection shall allow monitoring of the prices actually charged and shall give honest and complete information at the time it is requested.

*Article 7***Quality criteria and control**

1. The Commission (Eurostat) and the Member States shall set up a system for quality control based on reports and assessments as specified under point 5.3 of Annex I.

2. Member States shall provide the Commission (Eurostat), at its request, with all information necessary to evaluate the quality of the basic information listed in Annex I.

Member States shall also provide the Commission (Eurostat) with the details and the reasons for any subsequent changes in the methods used or any deviation from the methodological manual specified in Annex I.

3. Member States shall provide the Commission (Eurostat) with quality reports on the surveys for which they are responsible, as specified in Section 5 of Annex I.

4. The common criteria on which the quality control is based and the structure of the quality reports, as specified under point 5.3 of Annex I, shall be laid down in accordance with the regulatory procedure with scrutiny specified in Article 11(3).

*Article 8***Periodicity**

The Commission (Eurostat) shall calculate PPPs with reference to each calendar year.

*Article 9***Dissemination**

1. The Commission (Eurostat) shall publish the final annual results no later than 36 months after the end of the reference year.

⁽¹⁾ Council Regulation (EEC) No 696/93 of 15 March 1993 on the statistical units for the observation and analysis of the production system in the Community (OJ L 76, 30.3.1993, p. 1). Regulation as last amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council (OJ L 284, 31.10.2003, p. 1).

Publication shall be based on data available to the Commission (Eurostat) no later than three months before the publication date.

Nothing in this paragraph shall affect the right of the Commission (Eurostat) to publish preliminary results earlier than 36 months after the end of the reference year and the Commission (Eurostat) shall make these publicly available, including on its website.

2. The results published by the Commission (Eurostat) at an aggregated level for each Member State shall include at least the following:

- (a) PPPs at the level of GDP;
- (b) PPPs for private household consumption expenditure and actual individual consumption;
- (c) price level indices relative to the Community average; and
- (d) GDP, private household consumption expenditure and actual individual consumption and respective per capita figures in PPS.

3. If results are calculated for a wider group of countries, the PPPs of the Member States shall nevertheless be preserved, in pursuance of the principle of fixity.

4. Published final PPPs shall generally not be revised.

However, in the event of mistakes falling within the scope of Section 10 of Annex I, corrected results shall be published in accordance with the procedure laid down therein.

Exceptional general revisions shall be carried out if, owing to changes to the concepts underlying ESA 95 that affect PPP results, the volume index of GDP for any Member State changes by more than one percentage point.

*Article 10***Correction coefficients**

Member States shall not be required to undertake surveys solely for the purpose of establishing the correction coefficients to be applied to the remuneration and pensions of Community officials and other servants in accordance with the Staff Regulations.

*Article 11***Committee procedure**

1. The Commission shall be assisted by the Statistical Programme Committee.

2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. Where reference is made to this paragraph, Article 5a(1) to (4) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

Article 12

Implementing measures

1. The measures necessary for the implementation of the provisions of this Regulation, including measures to take account of economic and technical changes, shall be adopted, insofar as this does not involve a disproportionate increase in costs for the Member States, as laid down in paragraphs 2 and 3.

2. The following measures necessary for implementation of this Regulation shall be adopted in accordance with the regulatory procedure referred to in Article 11(2):

- (a) the definition of a set of minimum standards in order to achieve the essential comparability and representativity of the data as specified under points 5.1 and 5.2 of Annex I;
- (b) the definition of precise requirements as to the methodology to be used as specified in Annex I; and
- (c) the establishment and adjustment of detailed descriptions of the content of basic headings, provided that these remain compatible with ESA 95 or any succeeding system.

3. The following measures designed to amend non-essential elements of this Regulation, inter alia by supplementing it with new elements, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 11(3):

- (a) the adaptation of the definitions;

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Strasbourg, 11 December 2007.

For the European Parliament
The President
H.-G. PÖTTERING

For the Council
The President
M. LOBO ANTUNES

- (b) the adjustment of the list of basic headings (as specified in Annex II); and
- (c) the definition of quality criteria and the structure of the quality reports, pursuant to Article 7(4).

Article 13

Financing

1. The Member States shall receive from the Commission a financial contribution of a maximum of 70 % of the costs eligible under the Commission's grant rules.

2. The amount of such financial contribution shall be fixed as part of the annual budgetary procedures of the European Union. The budget authority shall determine the appropriations available each year.

Article 14

Review and report

The provisions of this Regulation shall be reviewed five years after its entry into force. It shall be revised, if appropriate, on the basis of a Commission report and proposal, submitted to the European Parliament and the Council.

Article 15

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

ANNEX I

METHODOLOGY

1. METHODOLOGICAL MANUAL AND WORK PROGRAMME

- 1.1. A methodological manual will be provided by the Commission (Eurostat), following consultation with the Member States, describing the methods used at the various stages of compiling PPPs, including the methods for estimating missing basic information and for estimating missing parities. The methodological manual will be revised whenever a significant change to the methodology is made. It may introduce new methods to improve data quality, reduce costs or lessen the burden on data suppliers.
- 1.2. The Commission (Eurostat) will establish, by 30 November each year and in consultation with the Member States, an annual Work Programme for the following calendar year setting out the timetable for the specification and the provision of the basic information required for that year.
- 1.3. The annual Work Programme will determine the format for provision of data to be used by the Member States, and any other actions necessary in order to accomplish the calculation and publication of PPPs.
- 1.4. The basic information supplied according to point 1.2 may be revised, but the results for the reference year will be calculated from information available according to the timetable specified in Article 9. Where information is not complete or not available at that date, the Commission (Eurostat) will estimate the missing basic information.
- 1.5. Should a Member State fail to submit complete basic information, it will specify why the information is incomplete, when it will submit complete information or, if appropriate, why complete information cannot be provided.

2. BASIC INFORMATION

2.1. **Basic information items**

For the purpose of this Regulation, basic information pursuant to Articles 2 and 4 and the minimum frequency of new data supply will comprise and be provided as follows:

Basic information	Minimum frequency
GDP expenditure weights ⁽¹⁾	Annual
Actual and imputed rentals ⁽²⁾	Annual
Compensation of employees	Annual
Temporal adjustment factors	Annual
Prices of consumer goods and services and related representativity indicators	3 years ⁽³⁾
Prices of equipment goods	3 years
Prices of construction projects	3 years
Spatial adjustment factors	6 years

⁽¹⁾ These weights shall be consistent with the lowest level of available aggregates from national accounts. If the required detail is not available, the Member State may provide best estimates for the missing positions.

⁽²⁾ The dwellings stock quantity approach, as described in the methodological manual, may be used instead of the price approach in cases where actual rentals are missing or are statistically unreliable in line with Regulation (EC) No 1722/2005.

⁽³⁾ The minimum frequency refers to the provision of data for a particular product group, related to the rolling cycle of surveys.

2.2. Procedure for obtaining basic information

The Commission (Eurostat), after taking account of the views of the Member States, will determine the sources and data suppliers to be used for each of the above items of basic information. If the Commission (Eurostat) obtains basic information from a data supplier other than a Member State, the latter will be relieved of the obligations set out in points 5.1.4 to 5.1.13.

3. NATIONAL AVERAGE PRICES

3.1. Notwithstanding the provisions of Article 2(2), data collection may be limited to one or more locations within the economic territory. Such data may be used for PPP calculations provided that they are accompanied by appropriate spatial adjustment factors. Such spatial adjustment factors will be used to adjust survey data in the relevant locations to those representative of the national average.

3.2. Spatial adjustment factors will be supplied at basic heading level. They will be no more than six years old at the reference period of the survey.

4. ANNUAL AVERAGE PRICES

Notwithstanding the provisions of Article 2(2), data collection may be limited to a specific period of time. Such data may be used for PPP calculations provided that they are accompanied by appropriate temporal adjustment factors. Such temporal adjustment factors will be used to adjust survey data in this period to those representative of the annual average.

5. QUALITY

5.1. Minimum standards for basic information

5.1.1. The list of items to be priced will be designed to comprise items whose specifications ensure comparability between countries.

5.1.2. The list of items to be priced will be designed so that each Member State can indicate at least one representative item which can be priced in at least one other Member State for each basic heading.

5.1.3. The item list will be designed in order to achieve the highest practicable level of equi-representativity so that, as a minimum, each country has to price one representative item for each basic heading and this representative item has to be priced by at least one other country.

5.1.4. Each Member State will price items according to the specifications in the item list.

5.1.5. Each Member State will price a sufficient number of items within each basic heading that are available in its market, even though they may not be considered as representative of that basic heading.

5.1.6. Each Member State will supply prices of at least one representative item within each basic heading. The representative items will be indicated by a representativity indicator.

5.1.7. Each Member State will collect a sufficient number of price quotations for each item priced to ensure a reliable average price per item taking account of its market structure.

5.1.8. The selection of outlet types will be designed to adequately reflect the domestic pattern of consumption within the Member State according to the item.

5.1.9. The outlet selection in a location will be designed to adequately reflect the pattern of consumption of the residents of the location and the availability of items.

5.1.10. Each Member State will supply the Commission (Eurostat) with data on compensation of employees for selected occupations with reference to the sector General Government (S 13) as defined in ESA 95.

- 5.1.11. Each Member State will supply the Commission (Eurostat) with temporal adjustment factors which allow calculation of PPPs from prices collected at a specific time which adequately reflect the annual average price level.
- 5.1.12. Each Member State will supply the Commission (Eurostat) with spatial adjustment factors which allow calculation of PPPs with prices collected in specific locations which adequately reflect the national average price level.
- 5.1.13. Each Member State will supply the Commission (Eurostat) with weights relating to each basic heading as specified in Annex II which reflect the expenditure pattern in the Member State for the reference year.

5.2. **Minimum standards for the validation of price survey results**

- 5.2.1. Each Member State will, before transmitting the data to the Commission (Eurostat), carry out a review of data validity based on:
- maximum and minimum prices,
 - the average price and coefficient of variation,
 - the number of priced items per basic heading,
 - the number of priced representative items per basic heading, and
 - the number of prices observed per item.
- 5.2.2. An electronic tool containing the algorithms required for the purposes of point 5.2.1 will be supplied by the Commission (Eurostat) to the Member States.
- 5.2.3. The Commission (Eurostat) will, before finalising the survey results, carry out validity checks, in conjunction with the Member States, based on indicators including:

For each basic heading:

- the number of items priced by each country,
- the number of items attributed a representativity indicator by each country,
- the price level index,
- the results of the previous survey covering the same basic heading, and
- price level indices in PPP terms for each country.

For each item:

- the number of prices observed by each country, and
- the variation coefficients of:
 - (i) average prices in national currencies,
 - (ii) price level indices in PPP terms, and
 - (iii) price level indices in PPP terms for each country.

- 5.2.4. The Commission (Eurostat) will, before finalising the PPP results at aggregate level, carry out validity checks based on indicators including:

At the level of total GDP and its main aggregates:

- the consistency of GDP expenditure weights and population estimates with published data,
- a comparison of per capita volume indices for current and previous calculations, and
- a comparison of price level indices for current and previous calculations.

At the level of each basic heading:

- a comparison of the GDP weighting structure for current and previous calculations, and
- estimates of missing data, where relevant.

5.3. Reporting and assessment

- 5.3.1. Each Member State will maintain documentation which gives a full description of the manner in which this Regulation has been implemented. This documentation will be available to the Commission (Eurostat) and the other Member States.
- 5.3.2. Each Member State will have its PPP process assessed at least once every six years by the Commission (Eurostat). The assessments, planned annually and included in the annual Work Programme, will review compliance with this Regulation. A report, based on the assessments, will be made by the Commission (Eurostat) and be made publicly available, including on its website.
- 5.3.3. In accordance with Article 7(3), shortly after each consumer price survey, a report by the Member State responsible will be given to the Commission (Eurostat) providing information on the way in which the survey was conducted. The Commission (Eurostat) will provide each Member State with a summary of these reports.

6. CONSUMER PRICE SURVEY PROCEDURE

- 6.1. Member States will carry out the price surveys according to the Work Programme.
- 6.2. For each survey, the Commission (Eurostat) will prepare the survey item list, based on proposals which will be made by each Member State for each basic heading.
- 6.3. The Commission (Eurostat) will provide, together with the item list, in all official languages of the European Union, a translation of all specifications in each survey list.

7. CALCULATION PROCEDURE

7.1. Calculation of bilateral parities at basic heading level

- (a) The calculation of multilateral Èltetò-Köves-Szulc (hereinafter referred to as 'EKS') parities at basic heading level will be based on a matrix of bilateral parities for each pair of participant countries.
- (b) The calculation of bilateral parities will be carried out by reference to the prices observed for, and the representativity indicators attributed to, the underlying items.
- (c) The average survey price for each item will be established as the simple arithmetic mean of the price observations recorded for that item.
- (d) The national annual average price will be estimated, where necessary, on the basis of the average survey price by using appropriate spatial and temporal adjustment factors.
- (e) The ratios of the adjusted average prices will then be calculated, where possible, for items and pairs of participant countries, together with their inverse.
- (f) PPPs will then be calculated, where possible, for all pairs of participant countries for the basic heading. For each pair of participant countries, PPPs will be calculated as the weighted geometric mean of:
- the geometric mean of the price ratios of items which are indicated as representative of both countries,
 - the geometric mean of the price ratios of items which are indicated as representative of the first country but not of the second country,
 - the geometric mean of the price ratios of items which are indicated as representative of the second country but not of the first country,

using weights reflecting the relative representativity of all items priced by both countries.

7.2. Estimation of missing bilateral parities

If for any basic heading the bilateral PPPs cannot be calculated, the missing bilateral PPPs will be estimated, where possible, by using the standard procedure of geometric averaging of indirect parities via third countries. Should the matrix of bilateral PPPs for a basic heading still contain any missing values after this estimation procedure, the calculation of multilateral EKS parities will then not be possible for the countries for which bilateral PPPs are missing. Such missing EKS parities will then be estimated by the Commission (Eurostat), using reference PPPs from similar basic headings or any other appropriate estimation method.

7.3. The calculation of bilateral parities at aggregate level

- (a) The calculation of bilateral parities at a particular level of national accounts aggregation will be carried out using the EKS parities (see point 7.4), and the GDP expenditure weights, for the underlying basic headings.
- (b) A Laspeyres-type parity will then be calculated for the selected level of aggregation as the arithmetic mean of the parities for the underlying basic headings, weighted by the relative percentages (or nominal values) for the second country of each pair of participant countries.
- (c) A Paasche-type parity will then be calculated for the selected level of aggregation as the harmonic mean of the parities for the underlying basic headings, weighted by the relative percentages (or nominal values) for the first country of each pair of participant countries.
- (d) A Fisher-type parity will then be calculated for the selected level of aggregation as the geometric mean of the Laspeyres-type and Paasche-type parities established for each pair of participant countries.

7.4. Calculation of transitive multilateral PPPS

The calculation of transitive multilateral parities will be carried out either at basic heading level or any aggregated level by using the EKS procedure based on a complete matrix of Fisher-type parities between each pair of participant countries as follows:

$$tEKS = \left(\prod_{i=1}^z \frac{tF_i}{F_i} \right)^{\frac{1}{z}}, \forall i, s$$

where $tEKS$ s denotes the EKS parity between country s and country t ;

tF s denotes the Fisher-type parity between country s and country t ;

z denotes the number of participant countries.

8. TRANSMISSION

- 8.1. The Commission (Eurostat) will supply to the Member States the templates for electronic transmission of the basic information necessary to calculate PPPs.
- 8.2. Member States will provide basic information to the Commission (Eurostat) in accordance with the templates.

9. PUBLICATION

In addition to the provisions contained in Article 9(2), the Commission (Eurostat) may publish results at a more detailed level after consultation with the Member States.

10. CORRECTIONS

- 10.1. When a mistake is discovered by a Member State, it will immediately and on its own initiative provide the Commission (Eurostat) with correct basic information. In addition, a Member State will inform the Commission (Eurostat) of any suspected inappropriate application of the calculation procedure.
- 10.2. After becoming aware of a mistake, made either by a Member State or the Commission (Eurostat), the Commission (Eurostat) will inform the Member States and recalculate the PPPs within one month.

- 10.3. If the mistakes discovered result in a change of at least 0,5 percentage points at the level of per capita GDP in PPS of any Member State, the Commission (Eurostat) will publish a correction as soon as possible, unless such mistakes are discovered later than three months after the results have been published.
 - 10.4. Where a mistake has occurred, the responsible body will take steps to prevent similar future occurrences.
 - 10.5. Revisions carried out after 33 months following the end of the reference year to GDP expenditure weights or to population estimates will not require a correction to be made to PPP results.
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ANNEX II

Basic headings as defined in Article 3(e)

BH No	Description
	INDIVIDUAL CONSUMPTION EXPENDITURE BY HOUSEHOLDS
	FOOD AND NON-ALCOHOLIC BEVERAGES
	Food
	Bread and cereals [COICOP 01.1.1]
1	Rice
2	Other cereals, flour and other cereal products
3	Bread
4	Other bakery products
5	Pasta products
	Meat [COICOP 01.1.2]
6	Beef and veal
7	Pork
8	Lamb, mutton and goat
9	Poultry
10	Other meats and edible offal
11	Delicatessen and other meat preparations
	Fish and seafood [COICOP 01.1.3]
12	Fresh, chilled or frozen fish and seafood
13	Preserved or processed fish and seafood
	Milk, cheese and eggs [COICOP 01.1.4]
14	Fresh milk
15	Preserved milk and other milk products
16	Cheese
17	Eggs and egg-based products
	Oils and fats [COICOP 01.1.5]
18	Butter
19	Margarine
20	Other edible oils and fats
	Fruit [COICOP 01.1.6]
21	Fresh or chilled fruit
22	Frozen, preserved or processed fruit and fruit-based products
	Vegetables [COICOP 01.1.7]
23	Fresh or chilled vegetables other than potatoes
24	Fresh or chilled potatoes
25	Frozen, preserved or processed vegetables and vegetable-based products
	Sugar, jam, honey, chocolate and confectionery [COICOP 01.1.8]
26	Sugar
27	Jams, marmalades and honey

BH No	Description
28	Confectionery, chocolate and other cocoa preparations
29	Edible ice, ice-cream and sorbet
	Food products n.e.c. [COICOP 01.1.9]
30	Food products n.e.c.
	Non-alcoholic beverages
	Coffee, tea and cocoa [COICOP 01.2.1]
31	Coffee, tea and cocoa
	Mineral waters, soft drinks, fruit and vegetable juices [COICOP 01.2.2]
32	Mineral waters
33	Soft drinks and concentrates
34	Fruit and vegetable juices
	ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS
	Alcoholic beverages
	Spirits [COICOP 02.1.1]
35	Spirits
	Wine [COICOP 02.1.2]
36	Wine
	Beer [COICOP 02.1.3]
37	Beer
	Tobacco
	Tobacco [COICOP 02.2.0]
38	Tobacco
	Narcotics
	Narcotics [COICOP 02.3.0]
39	Narcotics
	CLOTHING AND FOOTWEAR
	Clothing
	Clothing materials [COICOP 03.1.1]
40	Clothing materials
	Garments [COICOP 03.1.2]
41	Men's clothing
42	Women's clothing
43	Children's and infants' clothing
	Other articles of clothing and clothing accessories [COICOP 03.1.3]
44	Other articles of clothing and clothing accessories
	Cleaning, repair and hire of clothing [COICOP 03.1.4]
45	Cleaning, repair and hire of clothing
	Footwear
	Shoes and other footwear [COICOP 03.2.1]
46	Men's footwear
47	Women's footwear
48	Children's and infants' footwear

BH No	Description
	Repair and hire of footwear [COICOP 03.2.2]
49	Repair and hire of footwear
	HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS
	Actual rentals for housing
	Actual rentals for housing [COICOP 04.1.1 and 04.1.2]
50	Actual rentals for housing
	Imputed rentals for housing
	Imputed rentals for housing [COICOP 04.2.1 and 04.2.2]
51	Imputed rentals for housing
	Maintenance and repair of the dwelling
	Materials for the maintenance and repair of the dwelling [COICOP 04.3.1]
52	Materials for the maintenance and repair of the dwelling
	Services for the maintenance and repair of the dwelling [COICOP 04.3.2]
53	Services for the maintenance and repair of the dwelling
	Water supply and miscellaneous services relating to the dwelling
	Water supply [COICOP 04.4.1]
54	Water supply
	Miscellaneous services relating to the dwelling [COICOP 04.4.2, 04.4.3 and 04.4.4]
55	Miscellaneous services relating to the dwelling
	Electricity, gas and other fuels
	Electricity [COICOP 04.5.1]
56	Electricity
	Gas [COICOP 04.5.2]
57	Gas
	Liquid fuels [COICOP 04.5.3]
58	Liquid fuels
	Solid fuels [COICOP 04.5.4]
59	Solid fuels
	Heat energy [COICOP 04.5.5]
60	Heat energy
	FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE
	Furniture and furnishings, carpets and other floor coverings
	Furniture and furnishings [COICOP 05.1.1]
61	Kitchen furniture
62	Bedroom furniture
63	Living-room and dining-room furniture
64	Other furniture and furnishings
	Carpets and other floor coverings [COICOP 05.1.2]
65	Carpets and other floor coverings
	Repair of furniture, furnishings and floor coverings [COICOP 05.1.3]
66	Repair of furniture, furnishings and floor coverings

BH No	Description
	Household textiles
	Household textiles [COICOP 05.2.0]
67	Household textiles
	Household appliances
	Major household appliances whether electric or not [COICOP 05.3.1]
68	Major household appliances whether electric or not
	Small electric household appliances [COICOP 05.3.2]
69	Small electric household appliances
	Repair of household appliances [COICOP 05.3.3]
70	Repair of household appliances
	Glassware, tableware and household utensils
	Glassware, tableware and household utensils [COICOP 05.4.0]
71	Glassware, tableware and household utensils
	Tools and equipment for house and garden
	Major tools and equipment [COICOP 05.5.1]
72	Major tools and equipment
	Small tools and miscellaneous accessories [COICOP 05.5.2]
73	Small tools and miscellaneous accessories
	Goods and services for routine household maintenance
	Non-durable household goods [COICOP 05.6.1]
74	Non-durable household goods
	Domestic services and household services [COICOP 05.6.2]
75	Domestic services
76	Household services
	HEALTH
	Medical products, appliances and equipment
	Pharmaceutical products [COICOP 06.1.1]
77	Pharmaceutical products
	Other medical products [COICOP 06.1.2]
78	Other medical products
	Therapeutic appliances and equipment [COICOP 06.1.3]
79	Therapeutic appliances and equipment
	Out-patient services
	Medical Services [COICOP 06.2.1]
80	Medical Services
	Dental services [COICOP 06.2.2]
81	Dental services
	Paramedical services [COICOP 06.2.3]
82	Paramedical services
	Hospital services
	Hospital services [COICOP 06.3.0]
83	Hospital services

BH No	Description
	TRANSPORT
	Purchase of vehicles
	Motor cars [COICOP 07.1.1]
84	Motor cars with diesel engine
85	Motor cars with petrol engine of cubic capacity of less than 1 200cc
86	Motor cars with petrol engine of cubic capacity of 1 200cc to 1 699cc
87	Motor cars with petrol engine of cubic capacity of 1 700cc to 2 999cc
88	Motor cars with petrol engine of cubic capacity of 3 000cc and over
	Motor cycles [COICOP 07.1.2]
89	Motor cycles
	Bicycles [COICOP 07.1.3]
90	Bicycles
	Animal-drawn vehicles [COICOP 07.1.4]
91	Animal-drawn vehicles
	Operation of personal transport equipment
	Spare parts and accessories for personal transport equipment [COICOP 07.2.1]
92	Spare parts and accessories for personal transport equipment
	Fuels and lubricants for personal transport equipment [COICOP 07.2.2]
93	Fuels and lubricants for personal transport equipment
	Maintenance and repair of personal transport equipment [COICOP 07.2.3]
94	Maintenance and repair of personal transport equipment
	Other services in respect of personal transport equipment [COICOP 07.2.4]
95	Other services in respect of personal transport equipment
	Transport services
	Passenger transport by railway [COICOP 07.3.1]
96	Passenger transport by railway
	Passenger transport by road [COICOP 07.3.2]
97	Passenger transport by road
	Passenger transport by air [COICOP 07.3.3]
98	Passenger transport by air
	Passenger transport by sea and inland waterway [COICOP 07.3.4]
99	Passenger transport by sea and inland waterway
	Combined passenger transport [COICOP 07.3.5]
100	Combined passenger transport
	Other purchased transport services [COICOP 07.3.6]
101	Other purchased transport services
	COMMUNICATION
	Postal services
	Postal services [COICOP 08.1.0]
102	Postal services
	Telephone and telefax equipment
	Telephone and telefax equipment [COICOP 08.2.0]
103	Telephone and telefax equipment

BH No	Description
	Telephone and telefax services
	Telephone and telefax services [COICOP 08.3.0]
104	Telephone and telefax services
	RECREATION AND CULTURE
	Audio-visual, photographic and information processing equipment
	Equipment for the reception, recording and reproduction of sound and pictures [COICOP 09.1.1]
105	Equipment for the reception, recording and reproduction of sound and pictures
	Photographic and cinematographic equipment and optical instruments [COICOP 09.1.2]
106	Photographic and cinematographic equipment and optical instruments
	Information processing equipment [COICOP 09.1.3]
107	Information processing equipment
	Recording media [COICOP 09.1.4]
108	Pre-recorded recording media
109	Unrecorded recording media
	Repair of audio-visual, photographic and information processing equipment [COICOP 09.1.5]
110	Repair of audio-visual, photographic and information processing equipment
	Other major durables for recreation and culture
	Major durables for outdoor recreation [COICOP 09.2.1]
111	Major durables for outdoor recreation
	Musical instruments and major durables for indoor recreation [COICOP 09.2.2]
112	Musical instruments and major durables for indoor recreation
	Maintenance and repair of other major durables for recreation and culture [COICOP 09.2.3]
113	Maintenance and repair of other major durables for recreation and culture
	Other recreational items and equipment, gardens and pets
	Games, toys and hobbies [COICOP 09.3.1]
114	Games, toys and hobbies
	Equipment for sport, camping and open-air recreation [COICOP 09.3.2]
115	Equipment for sport, camping and open-air recreation
	Gardens, plants and flowers [COICOP 09.3.3]
116	Gardens, plants and flowers
	Pets and related products [COICOP 09.3.4]
117	Pets and related products
	Veterinary and other services for pets [COICOP 09.3.5]
118	Veterinary and other services for pets
	Recreational and cultural services
	Recreational and sporting services [COICOP 09.4.1]
119	Recreational and sporting services
	Cultural services [COICOP 09.4.2]
120	Photographic services
121	Other cultural services
	Games of chance [COICOP 09.4.3]
122	Games of chance

BH No	Description
	Newspapers, books and stationery
	Books [COICOP 09.5.1]
123	Books
	Newspapers and periodicals [COICOP 09.5.2]
124	Newspapers and periodicals
	Miscellaneous printed matter, stationery and drawing materials [COICOP 09.5.3 and 09.5.4]
125	Miscellaneous printed matter, stationery and drawing materials
	Package holidays
	Package holidays [COICOP 09.6.0]
126	Package holidays
	EDUCATION
	Pre-primary and primary education
	Pre-primary and primary education [COICOP 10.1.0]
127	Pre-primary and primary education
	Secondary education
	Secondary education [COICOP 10.2.0]
128	Secondary education
	Post-secondary non-tertiary education
	Post-secondary non-tertiary education [COICOP 10.3.0]
129	Post-secondary non-tertiary education
	Tertiary education
	Tertiary education [COICOP 10.4.0]
130	Tertiary education
	Education not definable by level
	Education not definable by level [COICOP 10.5.0]
131	Education not definable by level
	RESTAURANTS AND HOTELS
	Catering services
	Restaurants, cafés and the like [COICOP 11.1.1]
132	Restaurant services whatever the type of establishment
133	Pubs, bars, cafés, tea rooms and the like
	Canteens [COICOP 11.1.2]
134	Canteens
	Accommodation services
	Accommodation services [COICOP 11.2.0]
135	Accommodation services
	MISCELLANEOUS GOODS AND SERVICES
	Personal care
	Hairdressing salons and personal grooming establishments [COICOP 12.1.1]
136	Hairdressing salons and personal grooming establishments
	Electric appliances for personal care [COICOP 12.1.2]
137	Electric appliances for personal care

BH No	Description
	Other appliances, articles and products for personal care [COICOP 12.1.3]
138	Other appliances, articles and products for personal care
	Prostitution
	Prostitution [COICOP 12.2.0]
139	Prostitution
	Personal effects n.e.c.
	Jewellery, clocks and watches [COICOP 12.3.1]
140	Jewellery, clocks and watches
	Other personal effects [COICOP 12.3.2]
141	Other personal effects
	Social protection
	Social protection [COICOP 12.4.0]
142	Social protection
	Insurance
	Insurance [COICOP 12.5.1, 12.5.2, 12.5.3, 12.5.4 and 12.5.5]
143	Insurance
	Financial services n.e.c.
	FISIM [COICOP 12.6.1]
144	FISIM
	Other financial services n.e.c. [COICOP 12.6.2]
145	Other financial services n.e.c.
	Other services n.e.c.
	Other services n.e.c. [COICOP 12.7.0]
146	Other services n.e.c.
	BALANCE OF EXPENDITURE OF RESIDENT ABROAD AND EXPENDITURE OF NON-RESIDENTS ON THE ECONOMIC TERRITORY
	Final consumption expenditure of resident households in the rest of the world
	Final consumption expenditure of resident households in the rest of the world
147	Final consumption expenditure of resident households in the rest of the world
	Final consumption expenditure of non-resident households on the economic territory
	Final consumption expenditure of non-resident households on the economic territory
148	Final consumption expenditure of non-resident households on the economic territory
	INDIVIDUAL CONSUMPTION EXPENDITURE BY NON-PROFIT INSTITUTIONS SERVING HOUSEHOLDS
	HOUSING
	Housing
	Housing [COPNI 01.0.0]
149	Housing
	HEALTH
	Health
	Health [COPNI 02.1.1 to 02.6.0]
150	Health

BH No	Description
	RECREATION AND CULTURE
	Recreation and culture
	Recreation and culture [COPNI 03.1.0 and 03.2.0]
151	Recreation and culture
	EDUCATION
	Education
	Education [COPNI 04.1.0 to 04.7.0]
152	Education
	SOCIAL PROTECTION
	Social protection
	Social protection [COPNI 05.1.0 and 05.2.0]
153	Social protection
	OTHER SERVICES
	Other services
	Other services [COPNI 06.0.0 to 09.2.0]
154	Other services
	INDIVIDUAL CONSUMPTION EXPENDITURE BY GOVERNMENT
	HOUSING
	Housing
	Housing
155	Housing
	HEALTH
	Health benefits and reimbursements
	Medical products, appliances and equipment
156	Pharmaceutical products
157	Other medical products
158	Therapeutic appliances and equipment
	Health services
159	Out-patient medical services
160	Out-patient dental services
161	Out-patient paramedical services
162	Hospital services
	Production of health services
	Compensation of employees
163	Physicians
164	Nurses and other medical staff
165	Non-medical staff
	Intermediate consumption
166	Pharmaceutical products
167	Other medical goods
168	Therapeutic appliances and equipment
169	Intermediate consumption n.e.c.

BH No	Description
	Gross operating surplus
170	Gross operating surplus
	Net taxes on production
171	Net taxes on production
	Receipts from sales
172	Receipts from sales
	RECREATION AND CULTURE
	Recreation and culture
	Recreation and culture
173	Recreation and culture
	EDUCATION
	Education benefits and reimbursements
	Education benefits and reimbursements
174	Education benefits and reimbursements
	Production of education services
	Compensation of employees
175	Pre-primary and primary education
176	Secondary education
177	Post-secondary non-tertiary education
178	Tertiary education
	Intermediate consumption
179	Intermediate consumption
	Gross operating surplus
180	Gross operating surplus
	Net taxes on production
181	Net taxes on production
	Receipts from sales
182	Receipt from sales
	SOCIAL PROTECTION
	Social protection
	Social protection
183	Social protection
	COLLECTIVE CONSUMPTION EXPENDITURE BY GOVERNMENT
	COLLECTIVE SERVICES
	Collective services
	Compensation of employees
184	Compensation of employees (collective services relating to defence)
185	Compensation of employees (collective services other than defence)
	Intermediate consumption
186	Intermediate consumption (collective services relating to defence)
187	Intermediate consumption (collective services other than defence)
	Gross operating surplus
188	Gross operating surplus

BH No	Description
	Net taxes on production
189	Net taxes on production
	Receipts from sales
190	Receipts from sales
	EXPENDITURE ON GROSS FIXED CAPITAL FORMATION
	MACHINERY AND EQUIPMENT
	Metal products and equipment
	Fabricated metal products, except machinery and equipment [CPA 28.11 to 28.75]
191	Fabricated metal products, except machinery and equipment
	General purpose machinery [CPA 29.11 to 29.24]
192	Engines and turbines, pumps and compressors
193	Other general purpose machinery
	Special purpose machinery [CPA 29.31 to 29.72]
194	Agricultural and forestry machinery
195	Machine tools
196	Machinery for metallurgy, mining, quarrying and construction
197	Machinery for food, beverages and tobacco processing
198	Machinery for textile, apparel and leather production
199	Other special purpose machinery
	Electrical and optical equipment [CPA 30.01 to 33.50]
200	Office machinery
201	Computers and other information processing equipment
202	Electrical machinery and apparatus
203	Radio, television and communications equipment and apparatus
204	Medical, precision and optical instruments, watches and clocks
	Other manufactured goods n.e.c. [CPA 36.11 to 36.63]
205	Other manufactured goods n.e.c.
	Transport equipment
	Road transport equipment [CPA 34.10 to 34.30 and 35.41 to 35.50]
206	Motor vehicles, trailers and semi-trailers
207	Other road transport
	Other transport equipment [CPA 35.11 to 35.30]
208	Ships, boats, steamers, tugs, floating platforms, rigs
209	Locomotives and rolling stock
210	Aircraft, helicopters and other aeronautical equipment
	CONSTRUCTION
	Residential buildings
	One and two dwelling buildings [CPA division 45]
211	One or two dwelling buildings
	Multi-dwelling buildings [CPA division 45]
212	Multi-dwelling buildings

BH No	Description
	Non-residential buildings
	Agricultural buildings [CPA division 45]
213	Agricultural buildings
	Industrial buildings and warehouses [CPA division 45]
214	Industrial buildings and warehouses
	Commercial buildings [CPA division 45]
215	Commercial buildings
	Other non-residential buildings [CPA division 45]
216	Other non-residential buildings
	Civil engineering works
	Transport infrastructures [CPA division 45]
217	Transport infrastructures
	Pipelines, communication and power lines [CPA division 45]
218	Pipelines, communication and power lines
	Other civil engineering works [CPA division 45]
219	Other civil engineering works
	OTHER PRODUCTS
	Other products
	Products of agriculture, forestry, fisheries and aquaculture [CPA divisions 01, 02 and 05]
220	Products of agriculture, forestry, fisheries and aquaculture
	Software [CPA 72.20]
221	Software
	Other products n.e.c. [CPA n.e.c.]
222	Other products n.e.c.
	CHANGES IN INVENTORIES AND ACQUISITIONS LESS DISPOSALS OF VALUABLES
	CHANGES IN INVENTORIES
	Changes in inventories
	Changes in inventories
223	Changes in inventories
	ACQUISITIONS LESS DISPOSALS OF VALUABLES
	Acquisitions less disposals of valuables
	Acquisitions less disposals of valuables
224	Acquisitions less disposals of valuables
	BALANCE OF EXPORTS AND IMPORTS
	EXPORTS OF GOODS AND SERVICES
	Exports of goods
	Exports of goods to the EU and institutions of the EU
225	Exports of goods to EU countries
226	Exports of goods to institutions of the EU
	Exports of goods to third countries and international organisations
227	Exports of goods to third countries and international organisations

BH No	Description
	Exports of services
	Exports of services to the EU and institutions of the EU
228	Exports of services to EU countries
229	Exports of services to institutions of the EU
	Exports of services to third countries and international organisations
230	Exports of services to third countries and international organisations
	IMPORTS OF GOODS AND SERVICES
	Imports of goods
	Imports of goods from the EU and institutions of the EU
231	Imports of goods from EU countries
232	Imports of goods from institutions of the EU
	Imports of goods from third countries and international organisations
233	Imports of goods from third countries and international organisations
	Imports of services
	Imports of services from the EU and institutions of the EU
234	Imports of services from EU countries
235	Imports of services from institutions of the EU
	Imports of services from third countries and international organisations
236	Imports of services from third countries and international organisations