

Comparative price levels of consumer goods and services

Statistics Explained

Data from 21 June 2022

Planned update: 15 December 2022

" In 2021, the highest price level for consumer goods and services among the EU Member States was observed in Denmark (40 % above the EU average) and the lowest in Romania and Bulgaria (44 % below the average). "

" Denmark was the most expensive EU Member State for clothing and footwear in 2021, Bulgaria was the least expensive for alcoholic beverages and tobacco, clothing and footwear."

This article presents the most recent analysis of price levels for consumer goods and services in the [European Union \(EU\)](#) , focusing on [price level indices \(PLIs\)](#) , which provide a comparison of countries' price levels relative to the EU average and are calculated using [purchasing power parities](#) . The results are based on price surveys covering more than 2 000 consumer goods and services which were conducted across 36 European countries participating in the [Eurostat - OECD Purchasing Power Parities \(PPP\)](#) program. The group of participating countries includes the 27 EU Member States, three [EFTA](#) countries (Iceland, Norway and Switzerland), five [candidate countries](#) (Albania, Montenegro, North Macedonia, Serbia and Turkey) and one [potential candidate country](#) (Bosnia and Herzegovina).

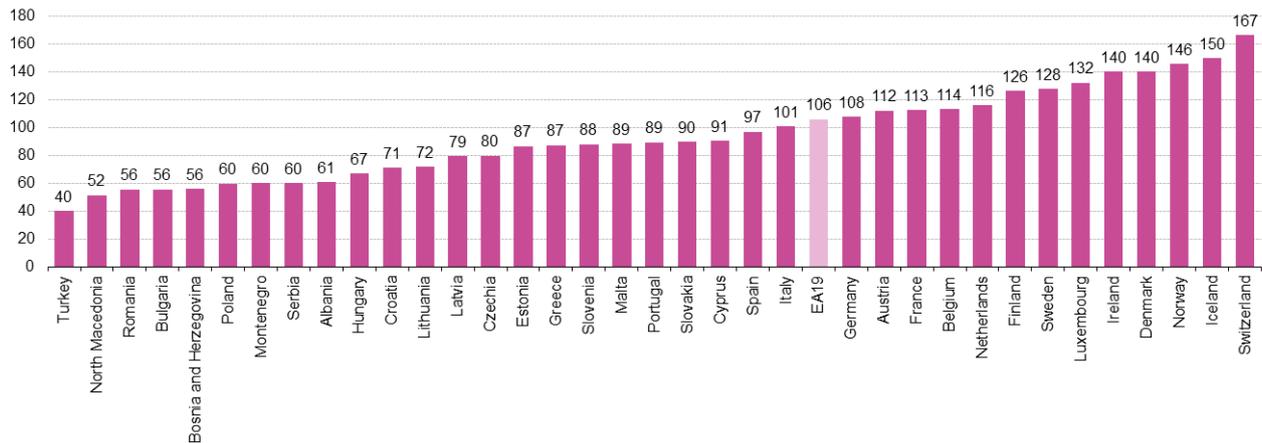
Overall price levels

In 2021, price levels for consumer goods and services differed widely across Europe. The highest price level among EU Member States was observed in Denmark, 40 % above the EU average, while in Romania and Bulgaria the price level was 44 % below the EU average.

An understanding of the differences in price levels is important in the comparison of economic data, such as [gross domestic product \(GDP\)](#) , because higher relative prices could make an economy look healthier than it really is. Observing price level differences is also important in the analysis of the development of the EU's [single market](#) for goods and services.

Figure 1 shows the price level indices (PLIs) for total [household final consumption expenditure \(HFCE\)](#) on goods and services in 2021.

Price level index for final household consumption expenditure (HFCE) 2021, (EU=100)



Source: Eurostat (online data code: prc_pppind)

eurostat

Figure 1: Price level index for final household consumption expenditure (HFCE) 2021, (EU=100)- Source: Eurostat (prc_ppp_ind)

Price levels for food, beverages, tobacco, clothing and footwear

Table 1 shows the PLIs for four important groups of consumer goods and services (see below for a description of the content of each product group):

- food and non-alcoholic beverages;
- alcoholic beverages and tobacco;
- clothing;
- footwear.

These four groups represent on average 19 %, 6 %, 3 % and 1 % of household expenditure, respectively. For reference, the PLIs of total HFCE (those of Figure 1) are also shown. The shaded fields indicate the highest and lowest PLIs per product group among all 36 participating countries. The highest and lowest PLIs among the 27 EU Member States are marked in bold. At the bottom of the table, coefficients of variation are provided for the [euro area \(EA-19\)](#), the current composition of the EU ([EU-27](#)) and the group of all 36 countries participating in the programme (All 36).

The coefficient of variation is defined as the [standard deviation](#) of the PLIs of the respective group of countries as a percentage of their average PLI. The higher the coefficient of variation for a given product group, the higher the [price dispersion](#) across countries.

Among the EU Member States, Luxembourg has the highest price level for food and non-alcoholic beverages, while Denmark is the most expensive for clothing and for footwear. Ireland has the highest PLI for alcoholic beverages and tobacco. Among all countries, Switzerland has the highest price level for food and non-alcoholic beverages, Norway for alcoholic beverages and tobacco, Iceland for clothing and Denmark for footwear.

North Macedonia shows the lowest price level of all 36 countries for alcoholic beverages and tobacco. Turkey is the least expensive of the participating countries for food and non-alcoholic beverages, as well as for clothing and for footwear. Among the EU Member States, Romania is the least expensive country for food and non-alcoholic beverages and Bulgaria is the least expensive country for the other three categories (alcoholic beverages and tobacco, clothing and footwear).

The highest price dispersion is found for alcoholic beverages and tobacco. This is mainly due to large differences in taxation on these products across the 36 countries. Much less dispersion is observed in the prices of clothing and footwear.

Price dispersion is naturally greatest within the 36 country group, which includes both the high price EFTA countries and the (mostly) low price candidate countries.

Price level index for food, beverages, clothing and footwear, 2021, EU=100

	HFCE	Food and non-alcoholic beverages	Alcoholic beverages and tobacco	Clothing	Footwear
Switzerland	166.7	166.1	128.7	132.7	110.6
Iceland	149.8	139.3	213.5	136.2	121.4
Norway	145.8	149.0	232.5	124.6	122.5
Denmark	140.3	120.0	133.8	134.4	127.7
Ireland	140.1	119.1	204.6	97.7	102.0
Luxembourg	132.4	124.6	94.9	105.1	110.6
Sweden	127.9	117.4	135.7	120.2	120.2
Finland	126.3	113.2	172.9	114.4	118.4
Netherlands	115.9	97.6	114.0	100.2	93.9
Belgium	113.5	105.4	114.8	99.7	103.8
France	112.6	110.0	133.7	105.4	110.4
Austria	112.2	107.1	87.7	102.6	101.7
Germany	108.0	104.5	96.4	98.7	98.3
EA19	106.0	104.6	104.5	100.6	100.7
Italy	100.8	105.7	93.7	105.4	97.2
Spain	97.0	97.6	88.9	86.9	98.1
Cyprus	90.7	109.2	93.5	95.1	92.5
Slovakia	89.7	95.0	83.6	97.9	94.9
Portugal	89.4	101.2	98.9	102.0	112.9
Malta	88.6	116.6	103.8	102.4	103.1
Slovenia	88.2	99.9	83.7	96.1	95.0
Greece	87.4	106.0	101.1	93.4	98.4
Estonia	86.6	97.4	100.1	107.0	107.7
Czechia	79.7	89.3	90.2	94.1	90.0
Latvia	79.3	97.0	95.3	102.1	107.3
Lithuania	71.9	87.9	88.2	102.0	103.2
Croatia	71.1	96.9	87.0	91.2	95.5
Hungary	67.1	84.9	78.6	87.6	90.7
Albania	60.9	82.6	70.8	90.6	104.5
Serbia	59.9	85.0	68.5	93.4	93.5
Montenegro	59.9	81.5	72.3	91.8	97.2
Poland	59.7	72.2	72.2	90.6	90.1
Bosnia and Herzegovina	55.8	78.4	66.0	99.0	95.8
Bulgaria	55.6	79.3	64.4	76.0	79.9
Romania	55.5	69.0	79.1	81.5	93.5
North Macedonia	51.5	64.2	49.3	77.4	85.0
Turkey	40.2	63.1	53.1	46.2	45.4
Coefficients of variation					
EA-19	17.8	8.5	28.3	5.7	6.8
EU	25.5	13.7	29.0	11.4	10.3
All 36	34.1	21.8	40.4	16.8	14.2

Notes: countries are sorted according to their overall price level for household final consumption expenditure in the first column.

The shaded fields indicate the highest and lowest PLIs among all 36 participating countries.

The highest and lowest PLIs per product group among the 27 EU Member States are marked in bold.

Source: Eurostat (online data code: prc_ppp_ind)

Table 1: Price level index for food, beverages, clothing and footwear, 2021, EU=100 - Source: Eurostat (prc_ppp_ind)

Price levels for energy, furniture, household appliances and consumer electronics

Table 2 shows the PLIs for another four groups of goods and services (see below for a description of the content of these groups):

- energy (electricity, gas and other fuels);
- furniture and furnishing, carpets and other floor coverings;

- household appliances;
- consumer electronics.

These groups represent on average 5 %, 2 %, 1 % and 1 % of household final consumption expenditure, respectively.

Price dispersion varies significantly between these four product groups, being most pronounced for electricity, gas and other fuels. Here, Denmark is the most expensive and Turkey the least expensive of all 36 participating countries, while the lowest price level for this category in the EU is reported for Hungary.

For the other three groups shown in this table the price dispersion is much lower – especially for consumer electronics.

Among EU Member States, Luxembourg shows the highest price levels for furniture and furnishings and Bulgaria the lowest. For household appliances Malta is the most expensive country among EU Member States, while the Netherlands has the highest PLI for consumer electronics. The lowest prices for these two groups are reported in Poland. Among all 36 countries, again Luxembourg is the most expensive for furniture and furnishings and Poland the least expensive for household appliances. Iceland has the highest price levels for household appliances and for consumer electronics, while Turkey is the least expensive for furniture and for consumer electronics.

Price level index for energy, furniture, household appliances and consumer electronics, 2021, EU=100

	HFCE	Energy	Furniture	Household appliances	Consumer electronics
Switzerland	166.7	107.3	106.6	126.7	95.0
Iceland	149.8	69.4	120.0	139.9	130.1
Norway	145.8	95.2	113.5	122.9	120.3
Denmark	140.3	131.8	109.1	116.5	99.1
Ireland	140.1	115.1	105.0	101.7	97.5
Luxembourg	132.4	88.6	129.6	114.9	107.9
Sweden	127.9	119.0	105.1	120.5	97.7
Finland	126.3	92.0	100.0	101.9	95.5
Netherlands	115.9	99.3	103.4	107.7	113.1
Belgium	113.5	109.1	103.9	105.8	106.2
France	112.6	100.6	107.1	106.0	110.8
Austria	112.2	104.6	108.8	101.5	98.9
Germany	108.0	120.3	97.2	103.7	98.7
EA19	106.0	107.8	102.0	101.9	101.4
Italy	100.8	115.4	108.4	93.6	94.0
Spain	97.0	112.9	102.0	99.2	98.7
Cyprus	90.7	97.2	104.1	107.6	107.3
Slovakia	89.7	79.4	79.5	98.8	100.3
Portugal	89.4	103.6	94.1	100.5	102.0
Malta	88.6	76.5	115.0	137.0	111.4
Slovenia	88.2	87.3	90.5	102.4	102.4
Greece	87.4	92.6	98.1	91.2	104.6
Estonia	86.6	76.7	95.4	91.7	99.9
Czechia	79.7	88.9	81.2	98.8	93.5
Latvia	79.3	68.6	87.4	86.8	108.2
Lithuania	71.9	62.5	86.1	95.1	101.9
Croatia	71.1	61.2	80.7	102.5	110.6
Hungary	67.1	47.7	80.5	83.1	92.2
Albania	60.9	46.2	87.5	124.4	113.0
Serbia	59.9	49.0	69.9	97.9	119.4
Montenegro	59.9	49.9	66.8	95.4	102.7
Poland	59.7	70.2	78.4	79.2	87.8
Bosnia and Herzegovina	55.8	47.9	62.4	95.8	112.0
Bulgaria	55.6	58.6	56.7	100.2	91.3
Romania	55.5	59.1	74.0	94.4	98.2
North Macedonia	51.5	48.8	58.4	94.0	95.2
Turkey	40.2	36.1	46.5	89.4	68.2
Coefficients of variation					
EA-19	17.8	17.1	10.9	10.2	5.2
EU	25.5	24.3	15.6	11.3	6.5
All 36	34.1	30.8	20.7	13.3	10.4

Notes: countries are sorted according to their overall price level for household final consumption expenditure in the first column.

The shaded fields indicate the highest and lowest PLIs among all 36 participating countries.

The highest and lowest PLIs per product group among the 27 EU Member States are marked in bold.

Source: Eurostat (online data code: prc_ppp_ind)

Table 2: Price level index for energy, furniture, household appliances and consumer electronics, 2021, EU=100 - Source: Eurostat (prc_ppp_ind)

Price levels for personal transport equipment, transport services, communication, restaurants and hotels

Table 3 shows the PLIs for another four groups of goods and services (see below for a description of the content of these groups):

- personal transport equipment;
- transport services;
- communication (services and equipment);

- restaurants and hotels.

These groups represent on average 2 %, 2 %, 3 % and 6 % of household final consumption expenditure, respectively.

Price dispersion for personal transport equipment is not very significant. Among all 36 countries, Denmark stands out with a high PLI for this category. This is due to high taxation levels on cars. The lowest price level for this product group was found in Poland.

Price dispersion is significantly higher among the other three service categories (transport services, communication as well as restaurants and hotels). In general, prices for services tend to show larger differences across countries than prices for goods, due to the higher share of labour input into services and the high dispersion of wages across countries.

Concerning transport services, Iceland shows the highest PLI among all countries, while Sweden reports the highest prices among EU Member States. The lowest price level among all countries is observed in Turkey, while Bulgaria is the least expensive EU Member State in this category. Among all 36 countries the highest price level for communication can be found in Norway and the lowest in Romania. Finally, Switzerland stands out with the most expensive restaurants and hotels, while the lowest prices for these services are observed in Turkey. Among the EU Member States, these positions are taken by Denmark and Bulgaria respectively.

Price level index for personal transport equipment, transport services, communication and restaurants & hotels, 2021, EU=100

	HFCE	Personal transport equipment	Transport services	Communication	Restaurants and hotels
Switzerland	166.7	104.8	133.3	155.3	168.7
Iceland	149.8	116.0	185.5	151.2	162.9
Norway	145.8	125.7	161.5	188.7	167.2
Denmark	140.3	138.4	116.9	103.8	154.5
Ireland	140.1	113.1	139.0	146.5	129.5
Luxembourg	132.4	95.5	93.5	142.3	125.3
Sweden	127.9	96.5	179.1	137.1	137.4
Finland	126.3	104.1	138.6	104.1	133.1
Netherlands	115.9	121.3	124.7	128.1	110.0
Belgium	113.5	100.7	109.8	169.9	123.1
France	112.6	99.2	114.1	100.0	121.1
Austria	112.2	106.0	120.6	100.4	115.5
Germany	108.0	101.0	121.8	119.4	104.6
EA19	106.0	101.3	106.0	109.5	102.8
Italy	100.8	102.0	87.7	83.9	103.2
Spain	97.0	96.2	85.8	119.1	88.2
Cyprus	90.7	85.3	110.0	109.0	88.0
Slovakia	89.7	82.0	65.1	110.5	88.6
Portugal	89.4	107.1	84.4	119.3	72.9
Malta	88.6	100.2	76.9	117.8	88.6
Slovenia	88.2	90.1	98.3	108.5	87.4
Greece	87.4	92.7	76.4	169.4	84.8
Estonia	86.6	86.1	73.0	82.3	95.5
Czechia	79.7	87.8	59.9	118.0	67.3
Latvia	79.3	88.2	66.4	83.2	87.4
Lithuania	71.9	88.1	75.2	75.7	76.1
Croatia	71.1	93.1	86.9	109.2	80.1
Hungary	67.1	87.3	66.0	89.6	61.8
Albania	60.9	85.1	48.3	112.4	46.1
Serbia	59.9	85.0	66.8	79.8	54.9
Montenegro	59.9	78.5	68.5	95.6	56.5
Poland	59.7	80.5	58.4	51.8	78.0
Bosnia and Herzegovina	55.8	82.3	77.1	94.7	54.7
Bulgaria	55.6	85.9	51.7	74.6	46.4
Romania	55.5	84.4	56.1	38.6	53.5
North Macedonia	51.5	87.6	47.8	67.9	46.8
Turkey	40.2	100.3	44.4	48.4	41.5
Coefficients of variation					
EA-19	17.8	10.1	23.7	22.9	18.1
EU	25.5	13.1	32.3	28.0	27.4
All 36	34.1	13.9	38.9	31.3	38.0

Notes: countries are sorted according to their overall price level for household final consumption expenditure in the first column.

The shaded fields indicate the highest and lowest PLIs among all 36 participating countries.

The highest and lowest PLIs per product group among the 27 EU Member States are marked in bold.

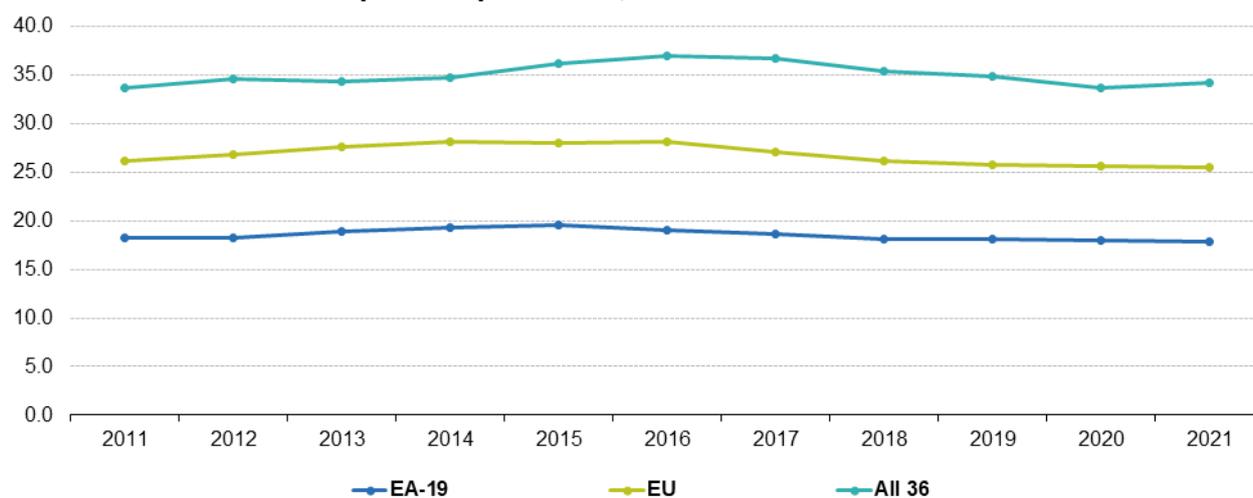
Source: Eurostat (online data code: prc_ppp_ind)

Table 3: Price level index for personal transport equipment, transport services, communication and restaurants & hotels, 2021, EU=100 - Source: Eurostat (prc_ppp_ind)

Price convergence

Figure 2 shows the development over time of the coefficients of variation of the PLI for total household final consumption expenditure for three country groups. A decrease of the coefficients of variation is an indication of price convergence. Between 2011 and 2021 all country groups exhibit slight changes in this indicator.

Price convergence - coefficients of variation of price level indices for final household consumption expenditure, 2011-2021



Source: Eurostat (prcппind) (online data code: prc_ppp_ind)

eurostat 

Figure 2: Price convergence - coefficients of variation of price level indices of final household consumption expenditure, 2011-2021 Source: Eurostat (prc_ppp_conv)

Data sources

The full methodology used in the [Eurostat - OECD Purchasing Power Parities \(PPP\)](#) programme is described in the 'Eurostat-OECD Methodological Manual on Purchasing Power Parities' available free of charge from the Eurostat website.

The PPP concept

In their simplest form PPPs are nothing more than price relatives that show the ratio of the prices in national currencies for the same good or service in different countries. For example, if the price of a hamburger in Sweden is 28.60 Swedish krona and in Italy it is 2.76 euro, the PPP for hamburgers between Sweden and Italy is 28.60 krona to 2.76 euro or 10.36 krona to the euro. In other words, for every euro spent on hamburgers in Italy, 10.36 krona would have to be spent in Sweden in order to obtain the same quantity and quality – or volume – of hamburgers.

Published PPPs, usually refer to product groups or broad aggregates like gross domestic product (GDP) rather than to individual products. However, these aggregate PPPs are based on sample surveys of individual goods and services.

Price level indices

The results of these surveys are expressed in the form of price level indices (PLIs). PLIs are the ratios of PPPs to exchange rates. They provide a comparison of countries' price levels relative to the European Union average: If the price level index is higher than 100, the country concerned is relatively expensive compared to the EU average, while if the price level index is lower than 100, then the country is relatively inexpensive compared to the EU average. The EU average is calculated as the weighted average of the national PLIs, weighted with expenditures from national accounts.

Price level indices are not intended to rank countries strictly. In fact, they only provide an indication of the order of magnitude of the price level in one country in relation to others, particularly when countries are clustered around a very narrow range of outcomes. The degree of uncertainty associated with the basic price data and the methods used for compiling PPPs, may affect in such a case the minor differences between the PLIs and result in differences in ranking which are not statistically or economically significant.

Organisation

Within the framework of the Eurostat-OECD Purchasing Power Parities (PPP) programme, surveys on prices of household goods and services are carried out cyclically by the National Statistical Institutes (NSIs) of 36 countries. Each survey cycle comprises six surveys, each related to a particular group of household consumption products. As two surveys are carried out per year, the whole survey cycle takes three years to complete, before the next cycle starts.

The PLIs in this article are thus based on price data collected in 2019, 2020 and 2021. The prices collected in 2019 and 2020 have been updated to 2021 using detailed consumer price indices. The PLIs are based on annual national average prices for in total more than 2000 goods and services. The expenditure shares are based on national accounts data for 2021 and represent the average over all participating countries. The national accounts data are also used as weights in the [aggregation](#) of detailed PLIs to aggregate PLIs such as for household final consumption expenditure.

Definition of the product groups

The product groups discussed in this article can be broadly described as follows.

- **Food and non-alcoholic beverages** : bread and cereals; meat; fish; milk; cheese; eggs; oils and fats; fruits; vegetables; potatoes; other food; non-alcoholic beverages.
- **Alcoholic beverages and tobacco** : spirits; wine; beer; tobacco.
- **Clothing** : clothing materials; men's, women's, children's and infant's clothing; other articles of clothing and clothing accessories (excludes cleaning, repair and hire of clothing).
- **Footwear** : men's, women's, children's and infants' footwear (excludes repair and hire of footwear).
- **Electricity, gas and other fuels** : electricity; gas; liquid fuels; solid fuels; and heat energy (all for domestic use).
- **Furniture and furnishing, carpets and other floor coverings** : kitchen furniture; bedroom furniture; living-room and dining-room furniture; other furniture and furnishings; carpets and other floor coverings (excludes repair of furniture, furnishings and floor coverings).
- **Household appliances** : refrigerators and freezers; washing machines; dishwashers; cookers; microwave ovens; vacuum cleaners; coffee makers; kettles; toasters, etc. (excludes repair of household appliances).
- **Consumer electronics** : televisions; DVD players; receivers; audio systems; MP3 players; cameras; desktop and laptop computers; monitors; printers; scanners; software; music CDs; movie DVDs; empty CDs and DVDs etc (excludes repair of such equipment).
- **Personal transport equipment** : motor cars; motor cycles and bicycles (excludes maintenance and repair of personal transport equipment, spare parts and fuels).
- **Transport services** : Passenger transport by railway, by road, by air, by sea and [inland waterway](#) and other purchased transport services (e.g. left luggage services, removal services).
- **Communication** : postal services; telephone and telefax equipment; telephone and telefax services.
- **Restaurants and hotels** : restaurants; cafés; pubs; bars; canteens; hotels; youth hostels etc.

Context

Purchasing power parities (PPPs) are indicators of price level differences across countries. PPPs tell us how many currency units a given quantity of goods and services costs in different countries. PPPs can thus be used as currency conversion rates to convert expenditures expressed in national currencies into an artificial common currency, the [purchasing power standard \(PPS\)](#) , eliminating the effect of price level differences across countries.

The main use of PPPs is to convert national accounts aggregates, like the gross domestic product (GDP) of different countries, into comparable volume aggregates. Applying nominal [exchange rates](#) in this process would overestimate the GDP of countries with high price levels relative to countries with low price levels. The use of PPPs ensures that the GDP of all countries is valued at a uniform price level and thus reflects only differences in the actual volume of the economy.

PPPs are also applied in analyses of relative price levels across countries. For this purpose, the PPPs are divided

by the current nominal exchange rate to obtain a price level index (PLI) which expresses the price level of a given country relative to another, or relative to a group of countries like the EU.

The common rules for the provision of input data, and for the calculation and dissemination of PPPs, are laid down in [Regulation \(EC\) No 1445/2007](#) of 11 December 2007.

Other articles

- [Comparative price levels for food, beverages and tobacco](#)
- [Comparative price levels for investment](#)
- [Inflation in the euro area](#)
- [GDP per capita, consumption per capita and price level indices](#)

Main tables

- [Purchasing power parities \(PPPs\)](#) , see:

Comparative price levels (tec00120)

Price and volume convergence between EU Member States (tec00121)

GDP per capita in PPS (tec00114)

Database

- [Purchasing power parities \(PPPs\)](#) , see:

Purchasing power parities (PPPs), price level indices and real expenditures for ESA2010 aggregates (prc_ppp_ind)

Convergence indicators (prc_ppp_conv)

Dedicated section

- [Purchasing power parities \(PPPs\)](#)
- [Harmonized Indices of Consumer Prices \(HICP\)](#)

Methodology

- [Eurostat-OECD Methodological Manual on Purchasing Power Parities](#)
- [Product list 2019-2021](#)
- [Purchasing power parities](#) (ESMS metadata file — prc_ppp_esms)

Legislation

- [Regulation \(EC\) No 1445/2007](#) of 11 December 2007 establishing common rules for the provision of basic information on Purchasing Power Parities and for their calculation and dissemination
- [Summaries of EU Legislation: Purchasing power parities](#)

External links

- [OECD - Prices and purchasing power parities \(PPP\)](#)
- [World Bank - International Comparison Program \(ICP\)](#)