

# GDP per capita, consumption per capita and price level indices

Statistics Explained

*Data from 19 June 2024*

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**" In 2023, Luxembourg recorded the highest level of GDP per capita in the EU followed by Ireland, the Netherlands, Denmark and Austria."**

**" Bulgaria had the lowest level of GDP per capita in the EU in 2023, behind Greece, Latvia and Slovakia."**

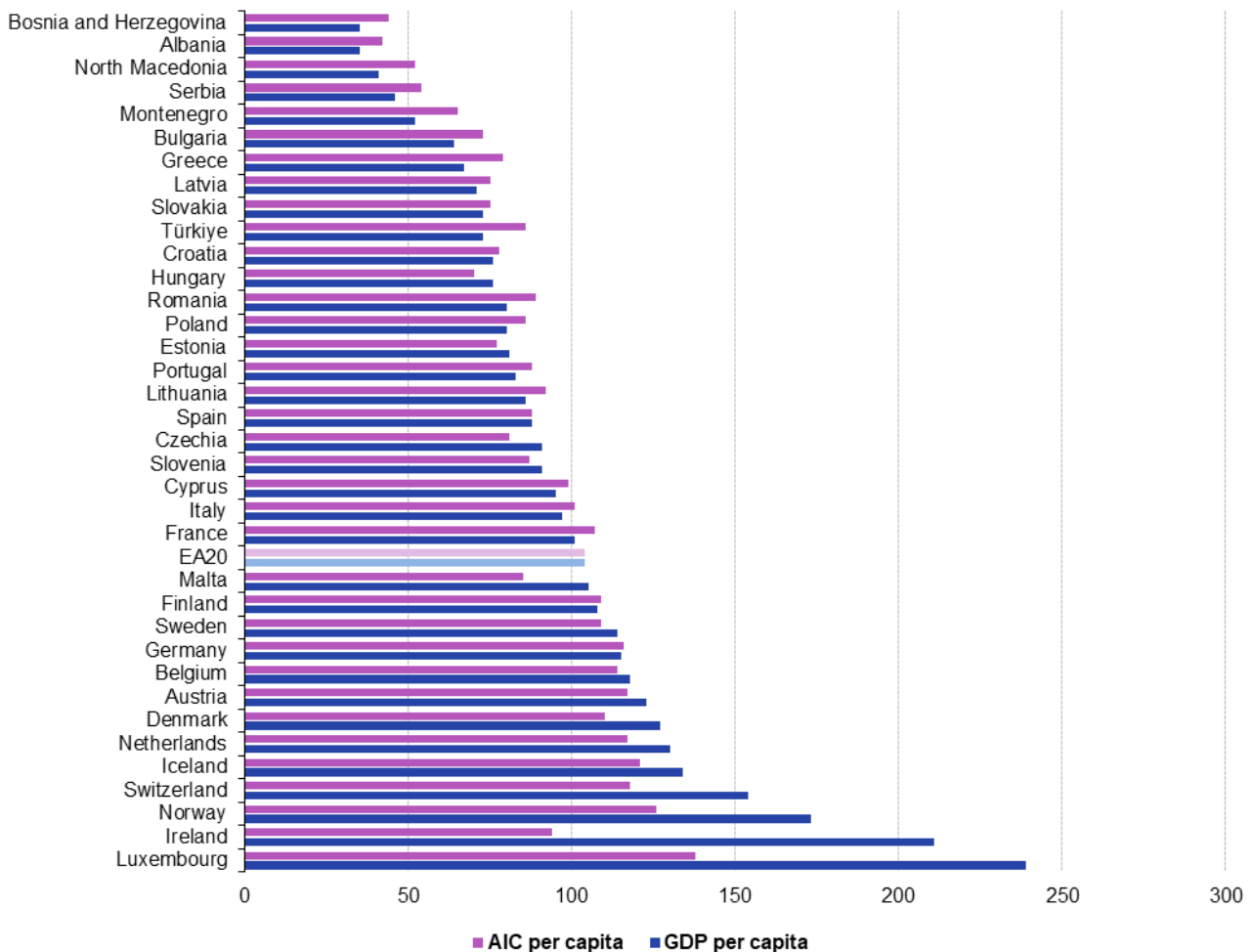
**" Luxembourg had the highest price level for actual individual consumption in the EU in 2023, Romania the lowest."**

This article presents the most recent analysis of purchasing power parities and related [economic indicators](#) ( [gross domestic product \(GDP\) per capita](#) and [actual individual consumption \(AIC\)](#) per capita) for the years 2013-2023, focusing primarily on the latest reference year. It also presents the [price level indices](#) of the [27 EU countries](#) , as well as of the three [EFTA](#) countries (Iceland, Norway and Switzerland) and six [EU candidate countries](#) (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia and Türkiye).

## Overview

In 2023, Luxembourg and Ireland recorded the highest levels of GDP per capita in the [EU](#) , at 139 % and 111 % above the EU average. Bulgaria was the EU Member State with the lowest GDP per capita, at 36 % below the EU average. Levels of actual individual consumption were somewhat more homogeneous, but still showed significant differences across Europe. Luxembourg recorded the highest level of AIC per capita in the [EU](#) , at 38 % above the EU average, as well as the highest price level, at 52 % above the EU average.

## Volume indices of GDP and AIC per capita, 2023, (EU=100)



Source: Eurostat (online data code: prc\_ppp\_ind)

eurostat

**Figure 1: Volume indices of GDP and AIC per capita, 2023, (EU=100) Source: Eurostat (prc\_ppp\_ind)**

### Relative volumes of GDP per capita

In international comparisons of national accounts data, such as GDP per capita, it is desirable not only to express the figures in a common currency, but also to adjust for differences in price levels. Failing to do so would result in an overestimation of GDP levels for countries with high price levels, relative to countries with low price levels.

Countries' volume indices of GDP per capita for the years 2013-2023 are shown in Table 1. The dispersion in GDP per capita across the EU Member States is quite remarkable. Luxembourg had the highest GDP per capita among all the 36 countries included in this comparison, in 2023 being well above the EU average (by almost 2.4 times). This is partly explained by the fact that a large number of foreign residents are employed in the country and thus contribute to its GDP, while they are not part of Luxembourg's resident population. Their consumption expenditure is recorded in the national accounts of their country of residence. The high level of GDP per capita in Ireland can be partly explained by the presence of large multinational companies holding intellectual property. The associated contract manufacturing with these assets contribute to GDP, while a large part of the income earned from this production is returned to the companies' ultimate owners abroad.

Gross domestic product (GDP) per capita, 2013-2023, (EU=100)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Luxembourg	279	283	282	278	269	260	252	259	266	256	239
Ireland	133	138	181	176	183	190	189	207	221	235	211
Netherlands	137	133	131	129	129	129	127	130	131	131	130
Denmark	130	129	128	128	130	129	126	133	135	136	127
Austria	133	132	131	130	127	128	126	125	122	124	123
Belgium	121	121	121	120	118	118	118	118	120	120	118
Germany	125	127	124	125	124	124	121	123	120	117	115
Sweden	128	126	128	124	121	119	118	122	122	117	114
Finland	115	113	111	111	111	111	109	114	112	110	108
Malta	90	93	98	98	102	103	104	99	103	104	105
EA20	108	107	107	107	107	106	106	105	105	104	104
France	110	108	107	106	104	104	106	105	103	100	101
Italy	101	98	97	99	98	97	97	94	96	98	97
Cyprus	84	81	83	88	90	91	93	91	94	94	95
Slovenia	83	83	83	84	86	87	89	89	90	90	91
Czechia	86	88	89	89	91	92	93	93	92	90	91
Spain	90	90	91	92	93	91	91	83	84	85	88
Lithuania	74	76	75	76	79	81	84	88	89	89	86
Portugal	78	77	78	78	77	78	79	76	75	79	83
Estonia	76	78	76	77	79	82	83	85	86	85	81
Poland	67	67	69	69	69	71	73	76	77	80	80
Romania	55	56	57	59	63	66	70	73	73	75	80
Hungary	68	69	70	69	69	71	73	74	75	76	76
Croatia	62	61	61	63	64	65	67	65	70	73	76
Slovakia	78	78	79	73	71	70	71	74	73	71	73
Latvia	63	64	65	66	67	69	69	72	71	72	71
Greece	72	72	70	68	67	66	66	62	63	67	67
Bulgaria	46	47	48	49	50	52	53	55	57	62	64
Norway	187	179	159	146	151	157	147	143	172	218	173
Switzerland	171	171	171	166	160	158	153	155	157	159	154
Iceland	126	126	131	134	133	131	129	122	123	133	134
Türkiye	62	65	68	66	66	63	59	61	61	67	73
Montenegro	41	41	43	45	46	48	50	45	47	50	52
Serbia	41	40	39	39	39	40	41	43	44	44	46
North Macedonia	38	39	39	41	40	41	42	42	43	42	41
Albania	29	30	30	30	30	30	30	31	31	34	35
Bosnia and Herzegovina	31	30	31	31	31	32	33	33	34	35	35

Note: countries are sorted according to their 2023 volume index per capita for GDP.

Source: Eurostat (online data code: prc\_ppp\_ind)

**Table 1: Volume indices GDP per capita, 2013-2023, (EU=100) Source: Eurostat (prc\_ppp\_ind)**

In 2023, Ireland came second among the EU Member States, at 111 % above the EU average, followed by the Netherlands, Denmark and Austria, each with a GDP per capita of more than 20 % above the average. The EFTA countries Norway, Switzerland and Iceland had a level of GDP per capita of 73 %, 54 % and 34 % above the EU average, respectively.

Belgium, Germany, Sweden, Finland, Malta and France were the other EU Member States with a GDP per capita above the EU average. Italy, Cyprus, Slovenia and Czechia had a level of GDP per capita of less than 10 % below the EU average. Spain, Lithuania, Portugal, Estonia, Poland and Romania had a GDP per capita between 10 % and 20 % below the EU average. The GDP per capita of Hungary, Croatia, the candidate country Türkiye, Slovakia and Latvia was less than 30 % below the average. Greece and Bulgaria had a GDP per capita of less than 40 % below the average. The candidate country Montenegro was placed at 48 % below the EU average, followed by the candidate countries Serbia, North Macedonia, Albania, and Bosnia and Herzegovina.

Table 1 shows a relative stability in the ranking of countries by GDP per capita volume index between 2013 and 2023. Among the EU countries, Luxembourg had the highest volume index over the whole period and Bulgaria the lowest.

## Relative volumes of consumption per capita

While GDP is mainly an indicator of the level of economic activity, actual individual consumption (AIC) is an alternative indicator better adapted to describe the material welfare of households.

Countries' volume indices of AIC per capita can be found in Table 2. Generally, levels of AIC per capita are more homogeneous than GDP but still there are substantial differences across the EU Member States.

Actual individual consumption (AIC) per capita, 2013-2023, (EU=100)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Luxembourg	157	155	155	151	151	152	146	139	143	138	138
Austria	126	125	123	122	120	119	117	115	118	118	117
Netherlands	121	119	117	114	114	115	113	114	114	116	117
Germany	124	125	123	124	124	123	122	124	120	118	116
Belgium	118	118	118	116	114	114	114	114	115	115	114
Denmark	119	118	118	116	116	117	115	121	121	110	110
Finland	116	115	116	115	114	113	111	114	112	110	109
Sweden	119	120	121	117	115	113	111	113	114	112	109
France	115	114	113	112	110	109	109	110	110	107	107
<b>EA20</b>	<b>107</b>	<b>107</b>	<b>107</b>	<b>107</b>	<b>106</b>	<b>106</b>	<b>105</b>	<b>104</b>	<b>104</b>	<b>104</b>	<b>104</b>
Italy	103	101	100	101	101	100	100	97	97	100	101
Cyprus	91	91	92	94	95	95	97	96	96	98	99
Ireland	97	96	97	97	95	96	95	89	91	94	94
Lithuania	80	83	85	86	89	90	93	94	96	94	92
Romania	56	57	59	64	69	74	78	81	83	85	89
Spain	88	90	91	91	93	91	91	84	86	86	88
Portugal	83	83	84	84	83	85	86	84	84	87	88
Slovenia	80	79	78	79	79	81	83	83	86	87	87
Poland	75	75	77	76	77	78	80	83	85	87	86
Malta	85	85	84	85	84	86	87	81	83	83	85
Czechia	79	80	80	81	83	84	85	85	86	83	81
Greece	81	81	79	77	78	77	77	75	75	78	79
Croatia	64	63	63	64	65	66	67	69	73	76	78
Estonia	69	70	72	73	73	75	76	78	79	78	77
Slovakia	76	76	76	70	68	68	70	76	75	77	75
Latvia	66	66	67	68	70	71	71	72	74	76	75
Bulgaria	51	53	54	55	55	57	58	60	64	69	73
Hungary	64	64	64	64	64	65	67	70	69	70	70
Norway	138	138	133	130	133	132	128	127	127	128	126
Iceland	121	121	121	119	120	118	117	124	123	123	121
Switzerland	137	137	137	133	127	125	122	123	120	117	118
Türkiye	63	66	69	68	69	66	64	65	67	77	86
Montenegro	53	54	55	57	57	59	60	59	59	63	65
Serbia	49	49	48	48	48	48	49	51	52	53	54
North Macedonia	44	44	46	46	46	46	47	48	51	50	52
Bosnia and Herzegovina	41	41	41	41	40	40	41	41	41	41	44
Albania	37	38	39	38	38	38	38	39	39	41	42

Note: countries are sorted according to their 2023 volume index per capita for AIC.

Source: Eurostat (online data code: prc\_ppp\_ind)

eurostat 

**Table 2: Volume indices AIC per capita, 2013-2023, (EU=100) Source: Eurostat (prc\_ppp\_ind)**

In 2023, Luxembourg had the highest level of AIC per capita among all 36 countries included in this comparison at 38 % above the EU average. It was followed by the EFTA country Norway, having an AIC per capita of 26 % above the EU average. While Luxembourg and Ireland were outstanding among EU Member States in terms of GDP, this was less so for AIC. As mentioned in the previous section, one reason for this is that cross-border workers contribute to GDP in Luxembourg while their consumption expenditure is recorded in the national accounts of the country of their residence. Ireland, having the second highest level of GDP per capita in the EU, had an AIC per capita of 6 % below the EU average.

As in the case of the volume index of GDP per capita, the ranking of countries in terms of the volume index of AIC per capita shows relative stability between 2013 and 2023. Luxembourg had the highest volume index among the EU countries over the whole period, while Hungary and Bulgaria alternated for the lowest.

## Price levels in Europe

Table 3 shows countries' price levels to the right, with the EU average at 100, for AIC only. It also shows the exchange rates applied in the calculation of the price level indices (see methodology described in *Data sources*). In the following section, the discussion is restricted to the price levels of AIC,

since this is closer to the concept of price levels that people are familiar with than a price level indicator based on GDP.

Exchange rates and price level indices for AIC, 2021-2023, (EU=100)

	Exchange rates			Price level indices for AIC		
	2021	2022	2023	2021	2022	2023
Luxembourg	1	1	1	153.4	152.7	152.3
Ireland	1	1	1	146.2	145.0	145.4
Denmark	7.437	7.440	7.451	142.7	147.1	143.2
Finland	1	1	1	128.9	128.0	127.8
Netherlands	1	1	1	121.0	120.7	122.2
Sweden	10.147	10.630	11.479	136.0	129.2	121.5
Belgium	1	1	1	115.8	117.6	118.4
Austria	1	1	1	116.1	116.2	118.1
Germany	1	1	1	109.0	109.7	109.7
France	1	1	1	108.5	107.1	107.1
<b>EA20</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>106.1</b>	<b>106.0</b>	<b>105.5</b>
Italy	1	1	1	102.0	101.1	99.3
Spain	1	1	1	97.6	97.6	94.2
Estonia	1	1	1	85.8	93.1	94.1
Cyprus	1	1	1	93.8	94.6	93.5
Malta	1	1	1	90.4	91.2	91.1
Slovenia	1	1	1	87.7	88.6	90.7
Portugal	1	1	1	87.2	86.3	85.6
Greece	1	1	1	84.5	84.7	84.2
Czechia	25.64	24.566	24.004	70.9	78.3	82.7
Latvia	1	1	1	76.4	80.7	82.5
Slovakia	1	1	1	77.2	80.1	82.4
Lithuania	1	1	1	67.5	74.4	77.3
Croatia	7.528	7.535	1	66.3	68.9	72.1
Hungary	358.520	391.290	381.850	62.7	62.7	69.4
Poland	4.565	4.686	4.542	56.3	58.0	63.5
Bulgaria	1.956	1.956	1.956	52.2	55.4	56.6
Romania	4.922	4.931	4.947	49.8	52.7	54.1
Switzerland	1.081	1.005	0.972	176.4	184.3	184.3
Iceland	150.150	142.240	149.130	160.6	173.1	168.8
Norway	10.163	10.103	11.425	153.7	153.0	135.3
Serbia	117.573	117.459	117.251	54.0	57.3	60.7
Albania	122.460	118.980	108.800	54.4	55.1	59.8
Montenegro	1	1	1	53.0	55.3	58.2
Bosnia and Herzegovina	1.956	1.956	1.956	52.5	54.6	55.2
North Macedonia	61.636	61.623	61.559	44.7	46.9	47.3
Türkiye	10.512	17.409	25.760	36.9	36.4	38.0
				<b>Coefficients of variation</b>		
EA-20				23.7	22.2	21.4
EU				30.3	28.4	26.6
All 36				39.7	39.1	36.7

Note: countries are sorted according to their 2023 price level index for AIC.

Source: Eurostat (online data code: prc\_ppp\_ind)

Table 3: Exchange rates and price level indices for AIC, 2021-2023, (EU=100) Source: Eurostat (prc\_ppp\_ind)

Luxembourg had the highest price level among the Member States, 52 % above the EU average. However, the

EFTA countries Switzerland and Iceland had higher price levels, at 84 % and 69 % above the EU average, respectively. The EFTA country Norway and the EU Member States Ireland, Denmark, Finland, the Netherlands and Sweden had price levels more than 20 % above the EU average. Belgium, Austria, Germany and France were the other EU Member States with price levels above the EU average.

Italy, Spain, Estonia, Cyprus, Malta and Slovenia had a price level less than 10 % below the EU average, followed by Portugal, Greece, Czechia, Latvia and Slovakia at less than 20 % below the EU average. Lithuania and Croatia had a price level situated less than 30 % below the EU average, followed by Hungary, Poland and the candidate country Serbia with price levels less than 40 % below that average. The candidate countries Albania and Montenegro, followed by EU Member State Bulgaria, candidate country Bosnia and Herzegovina and EU Member State Romania had price levels between 40 % and 50 % below the EU average. The candidate countries North Macedonia and Türkiye had price levels at 53 % and 62 % below the EU average, respectively.

Exchange rates are crucial in determining price levels, and consequently exchange rate movements often have a big impact on the development of price levels over time. In fact, several of the major price level changes observed between 2021 and 2023 can be at least partly explained by fluctuations of a country's currency against the euro. In 2022 and 2023, the national currency of Türkiye showed a large depreciation against the euro. Czechia showed the largest increase in price levels between 2021 and 2023.

The last three rows in Table 3 show the coefficients of variation of the price levels for three groups of countries: the euro area (EA-20), the EU Member States (EU) and the entire group of 36 countries (All 36). A time series of these coefficients can be interpreted as a rudimentary price convergence indicator.

These figures show that, firstly, and unsurprisingly, the price dispersion was much less pronounced in the euro area than in the EU as a whole and in the 36-country group (which can be partially impacted by the volatility of exchange rates). Secondly, over this 3-year period, price levels slightly converged for all 36 countries.

## Data sources

The data in this article are produced by the [Eurostat - OECD Purchasing power parities](#) programme. The full methodology used in the programme is described in the [Eurostat-OECD Methodological manual on purchasing power parities](#).

Purchasing power parities (PPPs) are currency conversion rates that are applied in order to convert economic indicators from national currency to an artificial common currency, called the Purchasing Power Standard (PPS), which equalises the purchasing power of different national currencies and enables meaningful volume comparisons between countries. For example, if the GDP or AIC per capita expressed in the national currency of each country participating in the comparison is divided by its PPP, the resulting figures neutralise the effect of differences in price levels and thus indicate the real volume of GDP or AIC at a common price level. When divided by the nominal exchange rate of a given year, the PPP provides an [estimate](#) of the price level of a given country relative to, for instance, the EU total.

PPPs are established on an annual basis. According to the regular publication calendar, PPPs are released as preliminary estimates 12 months after the end of the reference year and revised after 24 months, while the final results are released 36 months after the end of the reference year. In addition, an [early estimate](#) of PPPs, partly based on projections, is published 6 months after the end of the reference year. This regular PPP revision and [release calendar](#) is in line with the data delivery timetable for national accounts data as given in the [ESA 2010 Regulation 549/2013](#) of 21 May 2013. Thus, the 2021 results presented in this publication should be regarded as final, while the 2022 and 2023 results are still preliminary.

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, the PPP for hamburgers between Sweden and Italy is 28.60 krona to € 2.76 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.

The indices of relative volumes of GDP and AIC per capita published in this article have been adjusted for price level differences, and are expressed in relation to the European Union average (EU=100). Thus, for instance, if a country's volume index is below 100, that country's level of GDP (or AIC) per capita is lower than for the EU as a



whole. The price level adjustment factors, referred to as purchasing power parities, can also be used in comparison of countries' price levels.

Price level indices (PLIs) as presented in this publication are the ratios of PPPs to exchange rates. They provide a measure of the differences in price levels between countries by indicating for a given product group the number of units of common currency needed to buy the same volume of the product group or aggregate in each country. They are presented relative to the European Union average: if the price level index is higher than 100, the country concerned is relatively expensive compared with the EU average and vice versa. The EU average is calculated as the weighted average of the national PLIs, weighted by the expenditures corrected for price level differences.

Volume and price level indices are not intended to rank countries strictly. In fact, they only provide an indication of the order of magnitude of the volume or price level in one country in relation to others, particularly when countries are clustered around a very narrow range of outcomes. The level of uncertainty associated with the basic price and national accounts data, and the methods used for compiling PPPs imply that differences between countries that have indices within a close range should not be over-interpreted.

In national accounts, Household Final Consumption Expenditure (HFCE) denotes expenditure on goods and services that are purchased and paid for by households. Actual Individual Consumption (AIC), on the other hand, consists of goods and services actually consumed by individuals, irrespective of whether these goods and services are purchased and paid for by households, by government, or by non-profit organisations. In international volume comparisons, AIC is often seen as the preferable measure, since it is not influenced by the fact that the organisation of certain important services consumed by households, like health and education services differs a lot across countries. For example, if dental services are paid for by the government in one country, and by households in another, an international comparison based on HFCE would not compare like with like, whereas one based on AIC would.

## Context

GDP per capita volume indices (on a regional basis - see [Economy at regional level](#) ) are used in the allocation of [cohesion policy](#) funds within the EU. Funding is concentrated on less developed regions, with the goal of reducing economic, social and territorial disparities.

Eurostat is co-operating closely with other international institutions in the production and dissemination of PPPs. It co-operates with the OECD to produce PPP statistics for the OECD countries and with the [World Bank](#) and the [International Monetary Fund \(IMF\)](#) to produce global PPP data. See external links below.

## Other articles

- [Comparative price levels for food, beverages and tobacco](#)
- [Comparative price levels of consumer goods and services](#)
- [Comparative price levels for investment](#)
- [Economy at regional level](#)
- [National accounts and GDP](#)

## Main tables

- [Purchasing power parities \(t\\_prc\\_ppp\)](#) , see:

Comparative price levels (tec00120)

Price and volume convergence between EU Member States (tec00121)



GDP per capita in PPS (tec00114)

## Database

- [Purchasing power parities \(prc\\_ppp\)](#) , 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 \(PPPs\)](#)

## Methodology

- [Eurostat-OECD Methodological manual on purchasing power parities](#)
- [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](#)
- [Regulation \(EU\) No 549/2013](#) (ESA 2010 Regulation) of 21 May 2013 on the European system of national and regional accounts in the European Union
- [Summaries of EU Legislation: European Union system of national and regional accounts](#)

## External links

- [OECD - Purchasing Power Parities \(PPP\)](#)
- [World Bank - International Comparison Program \(ICP\)](#)