

## Major dispersion in consumer prices across Europe

### Comparative price levels in 37 European countries for 2011

**In 2011, price levels for consumer goods and services differed widely across Europe. Among the EU Member States, in Denmark consumer prices were 42% higher than the EU average, while the cheapest country was Bulgaria (49% below the average).**

These are the main results of price surveys covering more than 2400 consumer goods and services across 37 European countries. Those surveys are part of the Eurostat-OECD Purchasing Power Parities (PPP) programme (see methodological notes).

The group of 37 countries, participating in this programme includes 27 Member States, three EFTA countries (Iceland, Norway and Switzerland), acceding state Croatia, four candidate countries (Montenegro, the former Yugoslav Republic of Macedonia, Serbia and Turkey) as well as two potential candidate countries (Albania, Bosnia and Herzegovina).

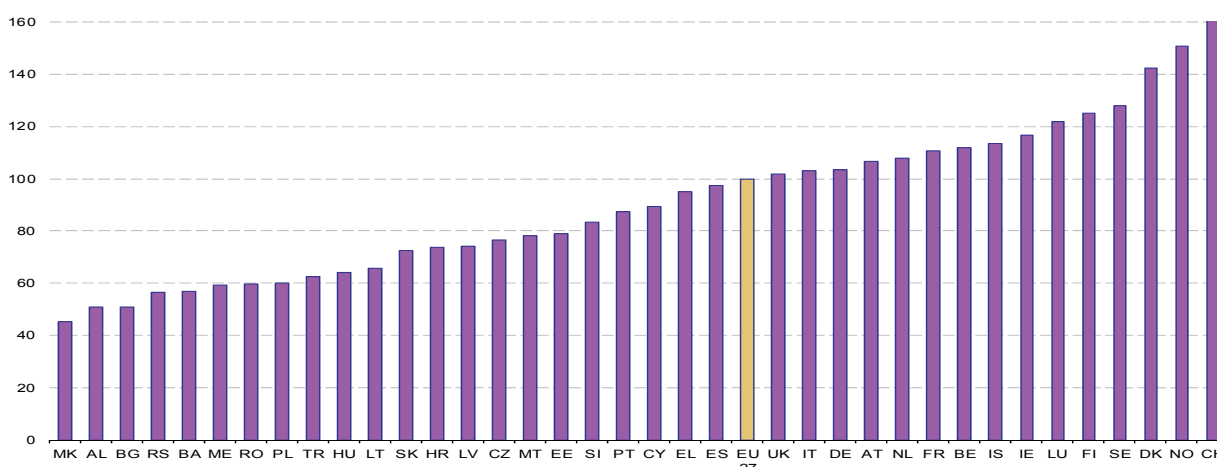
The results of the surveys are expressed in "price level indices" (PLIs), which provide a comparison

of countries' price levels with respect 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 and conversely, if the price level index is lower than 100, then the country is relatively cheap compared with the EU average.

Figure 1 shows the 2011 PLIs for total household final consumption expenditure (HFCE) on goods and services. Switzerland and Northern European countries tend consistently to have the highest prices while south-eastern European countries have the lowest prices.

On the following pages, PLIs are shown for a (non-exhaustive) selection of consumer goods and services.

**Figure 1: Price level index for household final consumption expenditure (HFCE), 2011, EU27=100**



Source: Eurostat (online data code: [prc\\_ppp\\_ind](#))  
 For the country codes, please refer to the methodological notes

## Food, beverages, tobacco, clothing and footwear

**Table 1: Price level index for 4 groups of goods and services, 2011, EU27=100**

	HFCE	Food and non-alcoholic beverages	Alcoholic beverages and tobacco	Clothing	Footwear
CH	162	156	124	138	138
NO	151	164	250	134	141
DK	142	136	125	119	113
SE	128	120	145	133	127
FI	125	116	133	120	121
LU	122	115	87	102	108
IE	117	118	163	92	77
IS	114	114	155	133	139
BE	112	115	97	113	114
FR	111	108	109	104	98
NL	108	95	101	100	108
AT	107	116	92	103	106
DE	103	110	97	103	105
IT	103	106	103	99	112
UK	102	103	147	97	82
EU27	100	100	100	100	100
ES	97	93	83	88	102
EL	95	103	92	103	108
CY	89	108	97	94	94
PT	87	90	85	93	84
SI	84	97	81	93	87
EE	79	86	83	101	112
MT	78	94	91	85	88
CZ	77	80	85	96	100
LV	74	88	85	97	107
HR	74	92	80	96	91
SK	72	83	84	100	93
LT	66	76	75	93	103
HU	64	83	63	85	93
TR	62	80	92	65	65
PL	60	69	73	89	82
RO	60	68	66	93	96
ME	59	77	56	100	110
BA	57	75	58	92	83
RS	57	72	53	101	103
BG	51	67	64	75	74
AL	51	70	50	72	71
MK	45	51	39	75	78
Variation coefficients:					
EA17	15.5	10.8	20.6	8.4	11.6
EU15	12.4	10.6	22.5	11.0	13.0
EU27	25.0	18.0	26.2	11.8	13.2
All 37	32.5	24.8	40.3	16.7	18.2

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

Table 1 shows the PLIs for four important groups of consumer goods and services: food and non-alcoholic beverages; alcoholic beverages and tobacco; clothing and footwear (see Box 2 for a description of the content of each product group). These groups represent on average 19%, 5%, 4% 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 37 participating countries. The highest and lowest PLIs among the 27 EU Member States are marked in bold.

At the bottom of the table, variation coefficients are provided for the euro area (EA17), EU15 Member States, the European Union (EU27) and the group of all countries participating in the programme (All 37). The variation coefficient is defined as the standard deviation of the PLIs of the respective group of countries as percentage of their average PLI. The higher the variation coefficient, the higher is the price dispersion in the respective product group.

The most expensive country for all product groups except for clothing is Norway. Amongst the EU Member States, Denmark is the most expensive for food and non-alcoholic beverages and Ireland has the highest PLI for alcoholic beverages and tobacco. The highest prices for clothing and footwear in the EU are reported in Sweden.

The former Yugoslav Republic of Macedonia shows the lowest price level of all 37 countries for food, beverages and tobacco, while Turkey is the cheapest of the participating countries for clothing and footwear. Within the EU Member States Bulgaria is the least expensive country for these product categories except for alcoholic beverages and tobacco, for which the lowest price level was found in Hungary.

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 37 countries. Much less dispersion is apparent in the prices of clothing and footwear.

Price dispersion is naturally greatest within the 37-country group, which includes both the high price EFTA countries and the (mostly) low price candidate countries.

## Energy, furniture, household appliances and consumer electronics

**Table 2: Price level index for 4 groups of goods and services, 2011, EU27=100**

	HFCE	Electricity, gas and other fuels	Furniture and furnishings, carpets and other floor coverings	Household appliances	Consumer electronics
CH	162	109	103	124	111
NO	151	120	112	130	122
DK	142	152	100	119	116
SE	128	128	109	128	113
FI	125	107	106	109	105
LU	122	100	107	96	104
IE	117	104	98	92	93
IS	114	63	110	143	148
BE	112	108	99	104	104
FR	111	99	111	106	101
NL	108	114	102	91	99
AT	107	107	105	98	107
DE	103	116	95	92	99
IT	103	105	111	108	107
UK	102	93	112	104	95
EU27	100	100	100	100	100
ES	97	105	95	108	99
EL	95	77	101	96	108
CY	89	108	102	114	110
PT	87	100	95	93	99
SI	84	96	89	104	104
EE	79	71	86	92	100
MT	78	89	99	129	125
CZ	77	104	76	97	98
LV	74	75	80	85	95
HR	74	70	75	96	105
SK	72	97	79	91	102
LT	66	82	70	92	93
HU	64	83	63	82	101
TR	62	70	59	91	94
PL	60	69	60	79	89
RO	60	54	64	81	105
ME	59	54	62	83	99
BA	57	59	54	90	112
RS	57	48	69	95	102
BG	51	56	53	87	92
AL	51	56	68	98	108
MK	45	58	56	79	97
Variation coefficients:					
EA17	15.5	11.4	8.5	9.9	6.5
EU15	12.4	14.8	5.6	10.0	6.0
EU27	25.0	21.6	18.6	13.0	7.6
All 37	32.5	27.1	22.3	15.4	10.3

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

Table 2 shows the PLIs for another four groups of goods and services: energy (electricity, gas and other fuels); furniture; household appliances and consumer electronics (see Box 2 for a description of the content of these groups). 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 by far the most expensive and Serbia the least expensive of all 37 participating countries, while Romania is the cheapest EU Member State.

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

Norway and UK show the highest price level for furniture and furnishings, and Bulgaria the lowest. For household appliances and consumer electronics Malta is the most expensive country among EU Member States and Iceland among all 37 countries. This may be due to the geographical position of both island countries (leading to higher transportation costs) and the small size of their internal markets.

The lowest prices for consumer electronics are reported in Poland, which is also the least expensive EU Member State in the category household appliances. However, among all 37 countries, the lowest price level for this product group is found in the former Yugoslav Republic of Macedonia.

## Personal transport equipment, transport services, communication, restaurants and hotels

**Table 3: Price level index for 4 groups of goods and services, 2011, EU27=100**

	HFCE	Personal transport equipment	Transport services	Communication	Restaurants and hotels
CH	162	115	120	121	157
NO	151	162	148	97	184
DK	142	167	124	98	154
SE	128	101	134	80	147
FI	125	114	134	81	130
LU	122	95	93	90	108
IE	117	108	120	118	126
IS	114	120	134	82	119
BE	112	101	98	122	113
FR	111	103	108	118	104
NL	108	112	108	123	105
AT	107	104	111	94	106
DE	103	101	113	82	103
IT	103	100	82	105	108
UK	102	93	126	96	105
EU27	100	100	100	100	100
ES	97	99	92	149	94
EL	95	91	88	128	98
CY	89	96	88	60	100
PT	87	122	74	112	79
SI	84	91	84	89	79
EE	79	90	74	74	74
MT	78	116	94	93	77
CZ	77	87	66	116	60
LV	74	89	69	81	77
HR	74	94	74	80	90
SK	72	84	53	124	72
LT	66	89	58	58	65
HU	64	92	71	109	52
TR	62	104	54	81	71
PL	60	85	57	69	76
RO	60	88	46	66	50
ME	59	84	46	74	63
BA	57	85	71	81	60
RS	57	85	52	56	57
BG	51	83	46	75	45
AL	51	98	42	87	42
MK	45	90	43	73	41
Variation coefficients:					
EA17	15.5	9.8	20.0	21.8	17.2
EU15	12.4	16.5	16.8	18.3	17.0
EU27	25.0	16.5	29.1	23.8	29.6
All 37	32.5	18.2	34.5	23.8	37.0

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

Table 3 shows the PLIs for another four groups of goods and services: personal transport equipment; transport services; communication (services and equipment); and restaurants and hotels. These groups represent on average 3%, 3%, 3% and 8% of household final consumption expenditure, respectively.

Price dispersion for personal transport equipment is not very significant and among all 37 countries Denmark and Norway stand out with very high PLIs for this category. This is due to high taxation levels on cars in these countries. The lowest prices are found in Bulgaria, but these are only 17% below the EU average, demonstrating the relative closeness of prices for personal transport equipment among the other 35 countries.

Price dispersion is significantly higher among the 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, Norway shows the highest PLIs among all countries and among EU Member States Sweden and Finland report the highest prices. The lowest PLI levels are observed in Bulgaria and Romania among the EU Member States and Albania among all countries.

The highest and lowest PLIs for communication can be observed in Spain and Serbia among all 37 countries, while Lithuania is the cheapest EU Member State.

Finally, Norway stands out with the most expensive restaurants and hotels, while the lowest prices for these services are observed in the former Yugoslav Republic of Macedonia. Among the EU Member States, these positions were taken by Denmark and Bulgaria respectively.

### Box 1: Data sources

Within the framework of the Eurostat-OECD Purchasing Power Parities (PPP) program, surveys on prices of household goods and services are carried out cyclically by the National Statistical Institutes (NSIs) of 37 countries: the 27 EU Member States, 3 EFTA countries (Iceland, Norway and Switzerland), 1 acceding state Croatia, 4 candidate countries (Montenegro, the former Yugoslav Republic of Macedonia, Serbia and Turkey) and 2 potential candidate countries (Albania, Bosnia and Herzegovina).

Each survey cycle comprises 6 surveys, each related to a particular group of household consumption products. As 2 surveys are run per year, the whole survey cycle takes 3 years to conclude, before the next cycle starts. The prices used for this publication are therefore collected in 2009, 2010 and 2011. The prices collected in 2009 and 2010 are updated to 2011 using detailed consumer price indices. The PLIs presented in this article are based on annual national average prices for in total about 2400 goods and services.

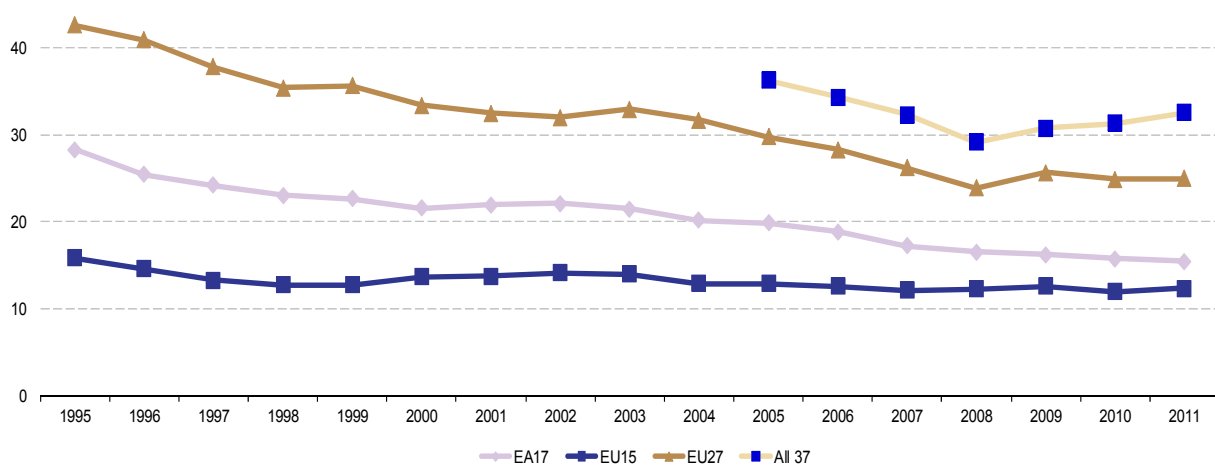
The expenditure shares reported in this article are based on national accounts data for 2010 and represent the average over all participating countries. The national accounts data are also used as weights in the aggregation of detailed PLIs to aggregate PLIs such as for Household Final Consumption Expenditure (HFCE).

## Price convergence

Figure 2 shows the development over time of the variation coefficient of the PLI for total household final consumption expenditure for four country groups. A decrease of the variation coefficient is an indication of price convergence. It can be seen that between 1995 and 2008 there was a clear decrease of the variation coefficient for the group of 27 Member States, however since 2008 there has been a slight increase in this indicator. On the other hand, for the group of EU15 Member States the

variation coefficient remains fairly stable. Within the euro area (EA17), the variation coefficient decreased in the early years, then was relatively stable between 1999 and 2003, and has continued to decrease to a lesser extent since 2004. Data for the group of all 37 countries are only available from 2005 onwards, but give an indication of a slight price divergence since 2008. This can however be partly explained by the impact of exchange rate fluctuations.

**Figure 2: Price convergence – variation coefficient of price level indices of final household consumption expenditure**



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

### **Box 2: The impact of exchange rates changes on PLIs**

As explained in the methodological notes, the PLI for a given country is calculated as its purchasing power parity (PPP) divided by its annual average exchange rate to the euro. This implies that exchange rate movements have an impact on the PLIs. An appreciation of a country's currency against the euro will make the country more expensive in comparison to euro area countries and this will show as an increase of the relative price level expressed in the PLI.

In 2011, several countries experienced relatively large exchange rate movements. The most significant examples are Turkey (depreciation of 17,1% between 2010 and 2011), Switzerland and Sweden (appreciation of respectively 10,7% and 5,3%). This explains in part some changes in the position of countries in PLIs compared with previously published data for 2010.

### **Box 3: Description of the product groups**

The product groups presented in the article include the following types of products:

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 and narcotics

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 infant's 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: for example: refrigerators and freezers, washing machines, dishwashers, cookers, microwave ovens, vacuum cleaners, coffee makes, kettles, toasters, etc. Excludes repair of household appliances.

Consumer electronics: for example: televisions, DVD players, receivers, audio systems, MP3 players, cameras, camcorders, desktop and laptop computers, monitors, printers, scanners, software, music CDs, movie DVDs, empty CDs and DVDs. 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

## METHODOLOGICAL NOTES

The data in this publication are produced by the Eurostat-OECD Purchasing Power Parity (PPP) programme. The full methodology used in the programme is described in the Eurostat-OECD Methodological manual on purchasing power parities which is available free of charge from the Eurostat website.

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 France is 2.84 euros and in the United Kingdom it is 2.20 pounds sterling, the PPP for hamburgers between France and the United Kingdom is 2.84 euros to 2.20 pounds or 1.29 euros to the pound. In other words, for every pound spent on hamburgers in the United Kingdom, 1.29 euros would have to be spent in France in order to obtain the same quantity and quality – or volume – of hamburgers.

Price levels 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.

Price level indices (PLIs) provide a comparison of the countries' price levels with respect 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 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. 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 cause minor differences between the PLIs and result in differences in ranking which are not statistically or economically significant.

The main use of PPPs is to convert expenditures (including GDP) of different countries into real expenditures (and real GDP). Real expenditures are valued at a uniform price level to reflect only differences in the volumes purchased in countries. PPP and real expenditures provide the price and volume measures required for international comparisons.

### Country abbreviations

#### EU member states

BE	Belgium	LU	Luxembourg
BG	Bulgaria	HU	Hungary
CZ	Czech Republic	MT	Malta
DK	Denmark	NL	Netherlands
DE	Germany	AT	Austria
EE	Estonia	PL	Poland
IE	Ireland	PT	Portugal
EL	Greece	RO	Romania
ES	Spain	SI	Slovenia
FR	France	SK	Slovakia
IT	Italy	FI	Finland
CY	Cyprus	SE	Sweden
LV	Latvia	UK	United Kingdom
LT	Lithuania		

EA17 Euro area

#### EFTA countries

CH	Switzerland
IS**	Iceland
NO	Norway

#### Acceding state

HR	Croatia
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#### Candidate countries

ME	Montenegro
MK*	The former Yugoslav Republic of Macedonia
RS	Serbia
TR	Turkey

#### Potential candidate countries

AL	Albania
BA	Bosnia and Herzegovina

\*MK: Provisional code which does not prejudice in any way the definitive nomenclature for this country which will be agreed following the conclusion of negotiations currently taking place on this subject at the UN

\*\* Also a candidate country

## Further information

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Eurostat Website: <http://ec.europa.eu/eurostat>

Data on "Purchasing power parities":

[http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing\\_power\\_parities/data/database](http://epp.eurostat.ec.europa.eu/portal/page/portal/purchasing_power_parities/data/database)

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