Price levels for food, beverages and tobacco across the European market differ significantly

Comparative price levels in 37 European countries for 2009

Price levels for food, beverages and tobacco among the EU Member States vary considerably. In 2009, the prices for food and non-alcoholic beverages in Poland were 64% of the EU average, while in Denmark they were 139%. Alcohol was priced in Finland at 170% of the EU average, but at 70% in Romania. For tobacco the highest prices were observed in Ireland (217% of the EU average), while the lowest were recorded in Bulgaria (46%).

These are the main findings of the most recent survey on food, beverages and tobacco, carried out in 2009 within the Eurostat-OECD Purchasing Power Parities (PPP) Programme. The survey covered a total of approximately 500 comparable products, enabling all countries to price a sufficient number of products representative of their consumption pattern. A total of 37 countries participated in the survey (see Box 1).

The results of the survey 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, while on the other hand, if the price level index is lower than 100, then the country is relatively inexpensive compared to the EU average. Chart 1 shows the 2009 PLIs for food and non-alcoholic beverages. On the following pages, PLIs are shown for sub-groups of products.

Chart 1: Price level index for food and non-alcoholic beverages, 2009, EU27=100
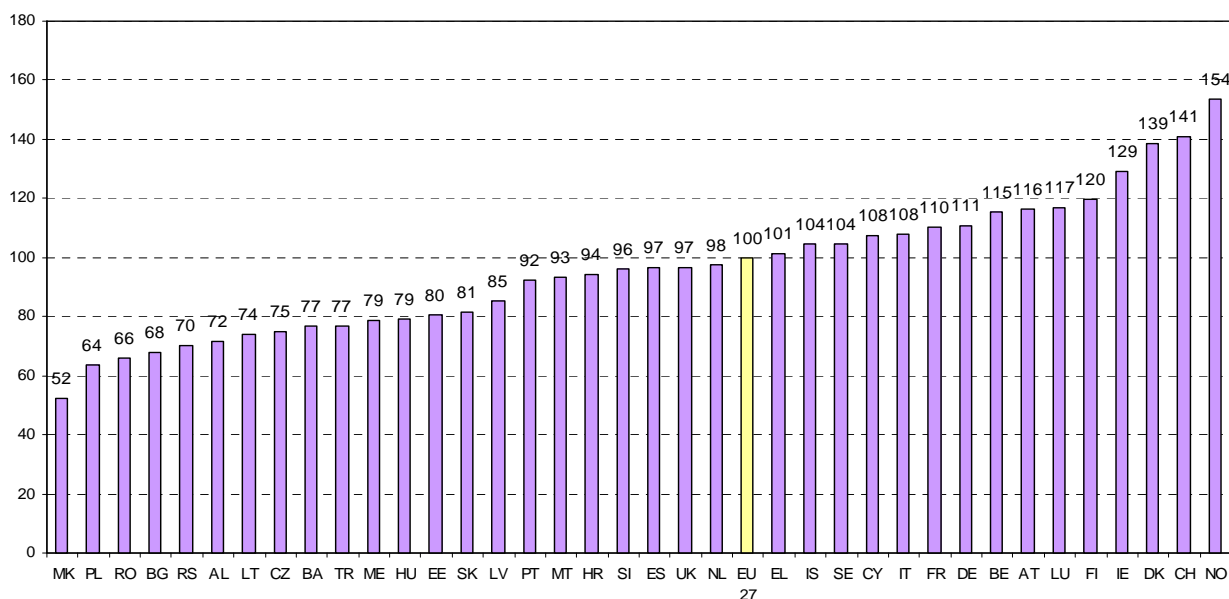
For country abbreviations please see methodological notes

Food, beverages and tobacco

Table 1: Price level indices for food, beverages and tobacco, 2009, EU27=100

	HFCE	Food	Non-alcoholic beverages	Alcoholic beverages	Tobacco
DK	**145**	134	**193**	135	117
CH	138	144	112	113	104
NO	137	**153**	168	**234**	**219**
FI	126	118	132	170	110
IE	125	128	146	167	217
LU	121	119	106	96	88
FR	114	112	96	95	133
BE	114	115	116	101	108
NL	108	98	96	99	111
AT	108	117	108	95	97
SE	107	104	110	138	130
IT	106	109	94	113	104
DE	106	111	106	91	119
IS	102	105	103	168	115
EU 27	100	100	100	100	100
ES	97	96	97	84	73
EL	97	100	115	105	72
UK	93	96	102	117	166
CY	91	106	130	119	88
PT	89	92	102	86	85
SI	85	96	93	102	65
MT	81	91	118	98	94
HR	76	93	112	110	67
EE	75	79	99	106	58
LV	75	83	114	118	62
SK	74	80	101	97	73
CZ	71	74	93	89	75
LT	68	72	91	99	51
TR	67	76	91	161	52
HU	65	78	89	84	51
ME	63	78	83	95	**30**
PL	59	63	76	89	52
BA	58	75	90	97	33
RO	57	65	75	70	47
RS	56	69	80	90	**30**
BG	53	67	80	77	46
AL	51	70	96	92	33
MK	**46**	**52**	**63**	**69**	**30**
Variation coefficients					
EA16	14.8	11.8	13.7	22.8	34.1
EU15	12.6	10.7	21.9	23.6	31.3
EU27	25.1	20.1	22.0	22.4	41.8
All 37	30.0	24.6	23.5	29.8	52.6

Source: Eurostat (prc_ppp_ind)

Table 1 shows the PLIs for four important groups: food, non-alcoholic beverages, alcoholic beverages and tobacco. These groups represent on average 16%, 2%, 4% and 3% of household expenditure respectively. For reference, the PLIs of total household final consumption expenditure (HFCE) are also presented.

The shaded fields indicate the highest and lowest PLIs per product group among the 27 EU Member States. The highest and lowest PLIs among all 37 participating countries are marked in bold.

At the bottom of the table, variation coefficients are provided for the euro area (EA16), the 15 "old" EU Member States (EU15), the European Union (EU27) and the group of all countries participating in the program (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.

Norway is the most expensive country of all 37 for food, alcoholic beverages and tobacco, whilst Denmark is the most expensive for non-alcoholic beverages.

Amongst the Member States, Denmark represents the most expensive country also for food. Finland has the highest price level of alcoholic beverages in the EU, while Ireland and the United Kingdom are by far the most expensive for tobacco. The former Yugoslav Republic of Macedonia is the least expensive country of all 37 in all four product groups. Montenegro and Serbia have an equally low price level for tobacco. Among the EU countries, the lowest prices are observed in Romania for 2 of these product groups, in Poland for food and Bulgaria for tobacco.

Price dispersion is most pronounced within the 37 country group, including both the high price EFTA countries and the mostly low price Western Balkan Countries. Price dispersion is much less pronounced in the euro area than in the EU as a whole (except for alcoholic beverages). The highest price dispersion is found for tobacco. This is mainly due to large differences in excise taxation on these products across the 37 countries.

Bread and cereals, meat, fish and dairy products

Table 2: Price level for 4 subcategories of food, 2009, EU27=100

	Food	Bread and cereals	Meat	Fish	Milk, cheese and eggs
NO	**153**	145	162	122	**169**
CH	144	138	**197**	**150**	121
DK	134	**146**	131	120	115
IE	128	132	121	113	137
LU	119	123	117	121	120
FI	118	128	120	103	111
AT	117	126	128	114	100
BE	115	116	121	128	122
FR	112	113	122	110	104
DE	111	110	126	109	92
IT	109	103	112	115	124
CY	106	116	90	119	137
IS	105	129	99	80	91
SE	104	114	107	99	90
EL	100	117	95	111	132
EU 27	100	100	100	100	100
NL	98	99	115	105	93
ES	96	111	86	93	105
SI	96	101	91	100	101
UK	96	84	102	75	95
HR	93	99	87	101	96
PT	92	106	80	81	111
MT	91	84	75	94	113
LV	83	81	75	77	89
SK	80	78	68	83	92
EE	79	78	70	77	86
ME	78	69	76	79	82
HU	78	71	72	93	89
TR	76	68	71	80	100
BA	75	68	77	75	79
CZ	74	69	69	82	82
LT	72	78	63	66	77
AL	70	62	64	71	90
RS	69	61	66	85	81
BG	67	52	59	72	92
RO	65	61	58	72	93
PL	63	58	56	69	63
MK	**52**	**48**	**51**	**57**	**60**
Variation coefficients					
EA16	11.8	13.0	18.7	12.1	13.3
EU15	10.7	12.4	13.2	13.2	13.1
EU27	20.1	24.9	26.2	18.9	17.7
All 37	24.6	29.0	33.3	22.0	21.4

Source: Eurostat (prc_ppp_ind)

The results of the survey also provide an insight into the different sub-groups of products for all participating countries. Table 2 presents the PLIs for bread and cereals, meat, fish and dairy products. These groups represent on average 17%, 25%, 3% and 19% of household expenditure on food respectively. For comparison this table includes the PLIs for food as a whole.

Amongst all 37 countries Switzerland shows the highest price levels for meat and fish, while Norway has the highest PLIs for dairy products and Denmark for bread and cereals. Denmark is also the most expensive country for meat within the EU, whilst Belgium is the most expensive for fish and Cyprus for milk, cheese and eggs.

The former Yugoslav Republic of Macedonia is the cheapest country in all sub-groups of products. Among the EU Member States, the lowest price level for meat and dairy products is observed in Poland, for bread and cereals in Bulgaria and for fish in Lithuania.

Price dispersion in all groups of countries does not show much variation between these four product groups. Meat has a somewhat higher price dispersion in most country groups except within EU15. Within the EU27, the lowest price dispersion is found for dairy products.

Oils and fats, fruits, vegetables, potatoes and other food products

Table 3: Price level indices for 3 subcategories of food, 2009, EU27=100

	Food	Oils and fats	Fruits, vegetables, potatoes	Other food products
NO	**153**	155	**154**	157
CH	144	**168**	131	126
DK	134	140	134	**160**
IE	128	105	142	123
LU	119	123	126	109
FI	118	111	129	115
AT	117	118	122	115
BE	115	124	109	104
FR	112	106	118	103
DE	111	98	127	106
IT	109	116	94	131
CY	106	110	92	121
IS	105	90	117	119
SE	104	104	119	95
EL	100	120	77	116
EU 27	100	100	100	100
NL	98	83	104	80
ES	96	83	100	102
SI	96	122	92	103
UK	96	87	117	91
HR	93	102	84	109
PT	92	98	81	116
MT	91	111	91	116
LV	83	115	85	95
SK	80	108	73	107
EE	79	100	80	92
ME	78	98	83	86
HU	78	98	75	89
TR	76	87	63	99
BA	75	81	73	87
CZ	74	84	70	86
LT	72	92	70	89
AL	70	93	61	92
RS	69	87	62	89
BG	67	89	65	84
RO	65	79	58	77
PL	63	80	68	72
MK	**52**	**62**	**43**	**70**
Variation coefficients				
EA16	11.8	11.4	19.1	10.0
EU15	10.7	14.6	16.2	16.1
EU27	20.1	14.9	24.7	17.7
All 37	24.6	20.3	28.9	19.3

Source: Eurostat (prc_ppp_ind)

Table 3 shows the PLIs for three further groups of food products: oils and fats; fruits, vegetables and potatoes as well as other food products. These groups represent on average 5%, 12% and 11% of household expenditure for food respectively.

Amongst all 37 countries the lowest prices for all categories can again be observed in the former Yugoslav Republic of Macedonia, while the highest price for oils and fats are noted in Switzerland, for fruits and vegetables in Norway and for other food in Denmark.

Among the EU Member States, Romania is the most inexpensive country for oils and fats and fruits and vegetables, whilst other food products are cheapest in Poland. The highest prices for fruits, vegetables and potatoes are observed in Ireland, whilst Denmark is the most expensive EU country for oil and fats.

Within these 3 categories, relatively large price dispersion can be observed for fruits, vegetables and potatoes.

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 Candidate Countries (Croatia, the former Yugoslav Republic of Macedonia and Turkey), 3 EFTA countries (Iceland, Norway and Switzerland) and 4 Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro and Serbia).

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 were collected in spring 2009 and extrapolated to annual average prices for 2009 using detailed consumer price indices. The PLIs presented in this article are based on annual national average prices for about 500 goods in total.

The expenditure shares reported in this article are based on national accounts data for 2008 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

A comparison of the price dispersion observed on the basis of the surveys conducted since 2003 (see Box 1) shows that for each group of products prices have converged within the EU. Table 4 shows the development of the variation coefficient of the PLI for the various categories. A decrease of the variation coefficient for the

Member States between 2003 and 2009 is an indication of price convergence for the respective product group. Price differences have decreased most for food and alcoholic beverages and least for non-alcoholic beverages.

Table 4: Price convergence in the EU: comparison between 2003, 2006 and 2009 by product groups

	2003	2006	2009	Change (%) 2003-2009
Food and non-alcoholic beverages	**28.6**	**23.9**	**19.8**	**-30.7%**
Food	**29.2**	**24.3**	**20.1**	**-31.2%**
Bread and cereals	35.2	30.6	24.9	-29.2%
Meat	36.5	33.0	26.2	-28.4%
Fish	27.0	24.7	18.9	-29.8%
Milk, cheese and eggs	22.2	20.1	17.7	-20.5%
Oil and fats	18.1	15.0	14.9	-18.1%
Fruits and vegetables	32.1	26.6	24.7	-23.0%
Other food	24.9	19.3	17.7	-28.8%
Non-alcoholic beverages	**25.3**	**23.1**	**22.0**	**-12.9%**
Alcoholic beverages	**32.5**	**28.0**	**22.4**	**-31.2%**
Tobacco	**54.1**	**50.4**	**41.8**	**-22.8%**

Price level indices for Kosovo[1]

In 2009, in the framework of a pilot project, the Statistical Office of Kosovo participated for the first time in the Eurostat-OECD Purchasing Power Parities Programme by carrying out the price survey on food, beverages and tobacco.

Table 5 shows the PLIs as they result from the survey Price levels in Kosovo are higher than those of the former Yugoslav Republic of Macedonia, but lower than those of the other Western Balkan countries.

Table 5: Price level indices for Kosovo in 2009

Food and non-alcoholic beverages	**65**
Food	**64**
Bread and cereals	56
Meat	58
Fish	70
Milk, cheese and eggs	67
Oils and fats	75
Fruits, vegetables, potatoes	70
Other food	75
Non-alcoholic beverages	**70**
Alcoholic beverages	**81**
Tobacco	**29**

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[1] *under UNSCR 1244/99*

Box 2: The impact of exchange rate 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. A depreciation of a country's currency against the euro will make the country cheaper in comparison to euro area countries and this will show as a decrease of the relative price level expressed in the PLI.

In 2009, several countries experienced relatively large exchange rate movements. The most prominent example is Iceland (depreciation of 35% between 2008 and 2009). This explains in part some changes in the position of countries in PLIs compared to previously published data for 2008.

Box 3: Description of the product groups

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

Bread and cereals: rice, other cereals, flour and other cereal products, bread, other bakery products, pasta products

Meat: beef and veal, pork, lamb, mutton and goat, poultry, other meats and edible offal, delicatessen and other meat preparations

Fish: fresh, chilled or frozen fish and seafood, preserved or processed fish and seafood

Milk, cheese, eggs: fresh milk, preserved milk and other milk products, cheese, eggs and egg-based products

Oils and fats: butter, margarine, other edible oils and fats

Fruits, vegetables, potatoes: fresh or chilled fruit, frozen, preserved or processed fruit and fruit-based products, fresh or chilled potatoes, frozen, preserved or processed vegetables and vegetable-based products

Other food products: sugar, jams, marmalades and honey, confectionery, chocolate and other cocoa preparations, edible ice, ice cream and sorbet, food products n.e.c.

Non-alcoholic beverages: coffee, tea and cocoa, mineral waters, soft drinks and concentrates, fruit and vegetable juices

Alcoholic beverages: spirits, wine, beer

Tobacco: tobacco and narcotics

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

Comparative 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 with 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 affect in such a case the 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 and so 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		

Candidate countries

HR	Croatia
MK*	former Yugoslav Republic of Macedonia
TR	Turkey

EFTA countries

CH	Switzerland
IS	Iceland
NO	Norway

Western Balkan countries

AL	Albania
BA	Bosnia and Herzegovina
ME	Montenegro
RS	Serbia

MK: Provisional code which does not prejudge 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

Further information

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

More information about Purchasing Power Parities:
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