

Contents

2005 Price level indices for construction	2
2005 PLIs for GFCF, total construction and its components	4
Price dispersion of construction products.....	6

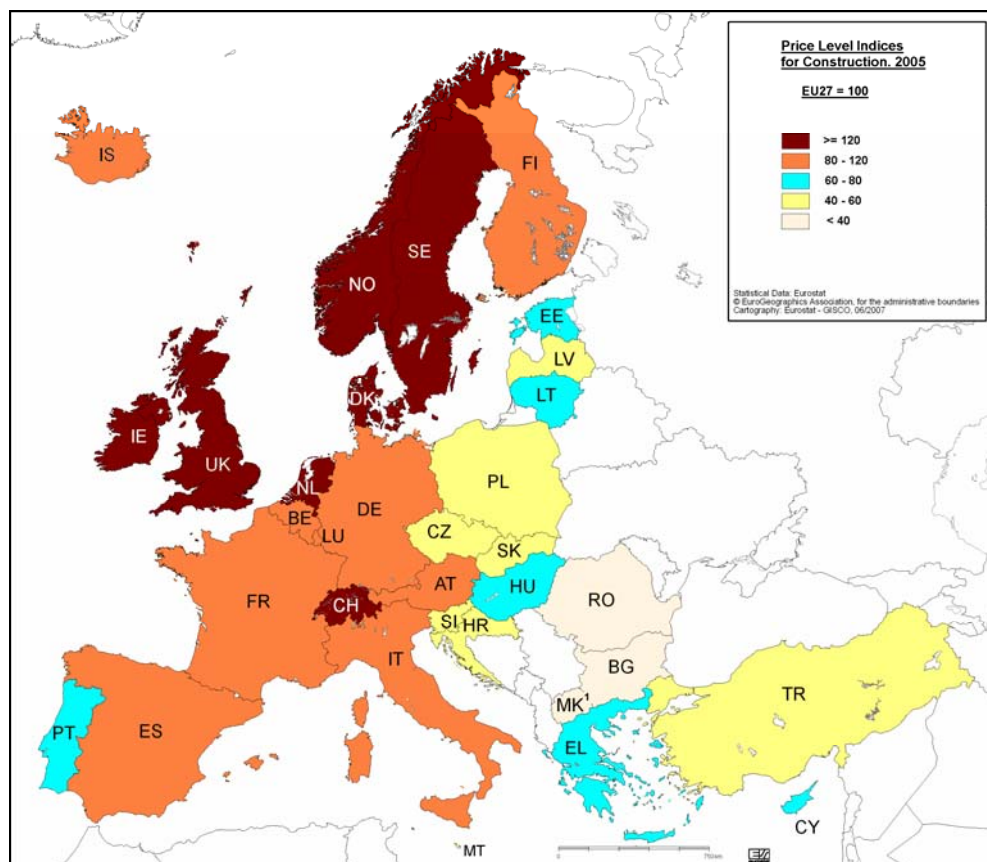


Comparative price levels for construction in 33 European countries for 2005

This article presents the main results of a survey on prices of construction in 2005 across 33 European countries. The survey is part of the Eurostat-OECD Purchasing Power Parities (PPP) program. The 33 countries that participated in the survey are the 27 Member States, the 3 candidate countries Croatia, the former Yugoslav Republic of Macedonia and Turkey and the 3 EFTA countries Iceland, Norway and Switzerland.

This construction survey, together with a survey on prices for investment goods, has as objective to produce PPPs and Price Level Indices (PLIs) for the above countries for Gross Fixed Capital Formation (GFCF). This aggregate is one of the main components of Gross Domestic Product (GDP). GFCF is made up of 3 expenditure categories: "Machinery and equipment", "Other products" and "Construction". Construction has a share of about 10 per cent of GDP in most of the EU Member States. The results of the investment goods survey are presented in a separate Statistics-in-Focus publication.

Figure 1: 2005 Price level indices for construction (EU27=100)



2005 Price level indices for construction

Price level indices 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 (see also methodological notes).

Figure 1 above shows the 2005 Construction PLIs of the 33 countries that participate in the Comparison Programme. The Northern countries tend to have the highest PLIs, while the Eastern countries have the lowest, particularly the former Yugoslav Republic of Macedonia and Bulgaria whose PLIs are 31 and 32, respectively. Southern countries tend to have intermediate PLIs.

Countries participating in this survey priced three different types of construction projects: residential buildings, non-residential buildings and civil engineering works.

The residential building category contains one or two dwelling buildings and multi-dwelling buildings.

For non-residential buildings, countries priced agricultural buildings, industrial buildings, commercial buildings and other non-residential buildings.

The category civil engineering works is made up of transport infrastructures, pipelines, communications and power lines and other civil engineering works. The 2005 construction survey was carried out during the months of June and July 2005.

The price level indices for construction in 2005 fall into the country groups shown in figure 2.

Group 1 (≥ 120):

Denmark (DK), Ireland (IE), The Netherlands (NL), Sweden (SE), United Kingdom (UK), Switzerland (CH) and Norway (NO) (7)

Group 2 (≥ 80 and < 120):

Belgium (BE), Germany (DE), Spain (ES), France (FR), Italy (IT), Luxembourg (LU), Austria (AT), Finland (FI) and Iceland (IS) (9)

Group 3 (≥ 60 and < 80):

Estonia (EE), Greece (EL), Cyprus (CY), Lithuania (LT), Hungary (HU) and Portugal (PT) (6)

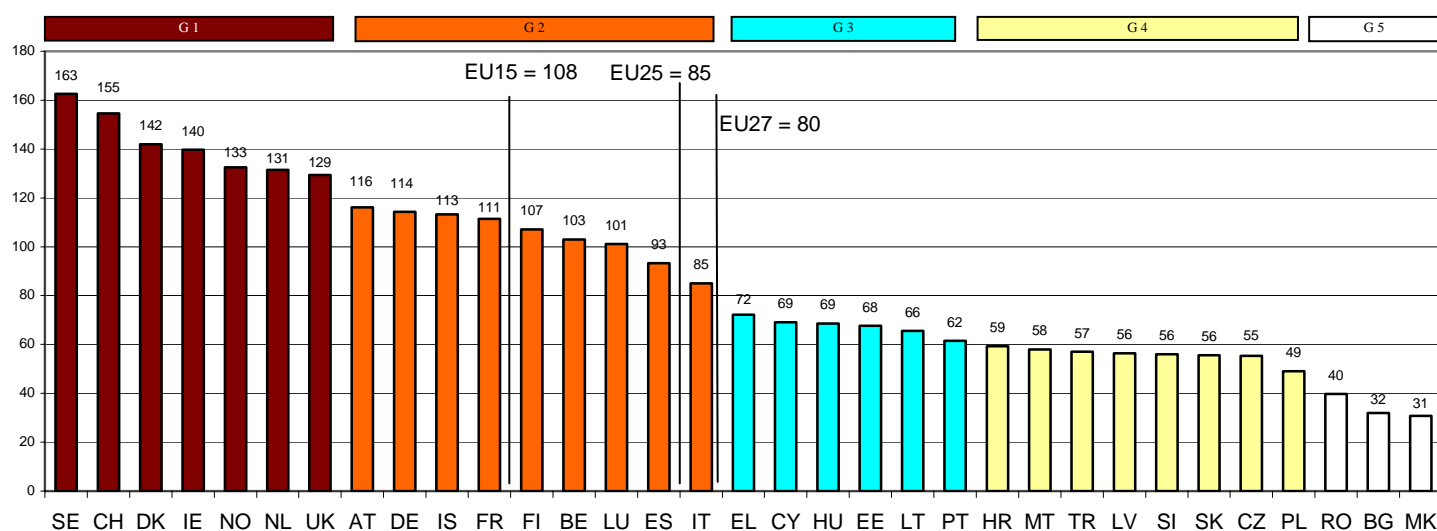
Group 4 (≥ 40 and < 60):

Czech Republic (CZ), Latvia (LV), Malta (MT), Poland (PL), Slovenia (SI), Slovakia (SK), Croatia (HR) and Turkey (TR) (8)

Group 5 (< 40):

Bulgaria (BG), Romania (RO) and the former Yugoslav Republic of Macedonia (MK¹) (3)

Figure 2: 2005 Price level indices for construction (EU27=100)



The graph shows that the most expensive countries Sweden (163) and Switzerland (155) register construction price levels 5 times higher than the cheapest countries Bulgaria (32) and the former Yugoslav Republic of Macedonia (31).

Group 1, the most expensive, is mainly made up of Northern countries, while in group 5, the least expensive, we can find the 2 new Member States Romania and Bulgaria, together with the former Yugoslav Republic of Macedonia.

Group 2 contains countries whose construction price level is from 20 per cent under the EU27 average to 20 per cent over this rate. This group comprises mainly Central and Southern European countries, although Iceland and Finland, with PLIs of 113 and 107, respectively, also form part of it.

Groups 3 and 4 are mainly made up of the 10 countries that joined the EU in 2004, although Greece (72) and Portugal (62) form part of Group 3 and the candidate countries Croatia (59) and Turkey (57) are in group 4.

Box 1: Some characteristics of the 2005 construction survey

The objective of the construction survey is that countries collect prices for a list of “bills of quantities”. Bills of quantities are fictitious projects that consist of a number of chapters or major components (like earthworks, concrete, masonry, etc.), which are made up of items or elementary components (like excavation of the terrain, dumping and compacting of spoil, etc.). The reason for using these bills of quantities in the construction survey is that it is very difficult to find the same actual project across countries.

The construction survey was carried out during the months of June and July. Countries collected prices for the 15 bills of quantities covered by the 2005 survey (see box 2).

Countries are asked to collect purchasers' prices for the bills of quantities, i.e., prices actually paid in the markets for the elementary components that make up those bills of quantities.

Price collection has been carried out by the National Statistical, often assisted by external experts on construction.

At the end of the price collection period, countries had priced in total 744 bills of quantities, taking into account their alternatives. These alternatives are necessary due to the fact that, since there is a close connection between the materials used and the construction methods adopted (that depend of the regions and their climate, etc.), variants for a number of elementary components (items) are included in the bills of quantities for improving their representativity.

The bills of quantities priced by the largest number of countries in 2005 were the office building (30), the sewer main (29) and the agricultural shed and the asphalt road (28, both of them). The bills of quantities least priced by countries were the Nordic house (11) and the concrete road and the factory building (each 14).

2005 PLIs for GFCF, total construction and its components

Table 1: 2005 Price level indices for GFCF, total construction and its components (EU27=100)

Country		GFCF	Total Construction	Residential buildings	Non-residential buildings	Civil engineering works
BELGIUM	BE	99	103	105	100	106
BULGARIA	BG	52	32	29	31	46
CZECH REPUBLIC	CZ	71	55	45	57	74
DENMARK	DK	125	142	162	127	123
GERMANY	DE	104	114	116	116	89
ESTONIA	EE	78	68	63	70	77
IRELAND	IR	128	140	152	133	100
GREECE	EL	84	72	66	75	86
SPAIN	ES	96	93	89	89	117
FRANCE	FR	109	111	113	112	102
ITALY	IT	91	85	84	85	72
CYPRUS	CY	81	69	69	66	75
LATVIA	LV	69	56	53	51	87
LITHUANIA	LT	74	66	63	61	85
LUXEMBOURG	LU	100	101	103	97	114
HUNGARY	HU	78	69	61	66	97
MALTA	MT	73	58	52	53	95
NETHERLANDS	NL	113	131	140	122	115
AUSTRIA	AT	107	116	117	114	117
POLAND	PL	65	49	39	51	70
PORTUGAL	PT	78	62	54	65	75
ROMANIA	RO	60	40	33	41	65
SLOVENIA	SI	70	56	49	58	69
SLOVAKIA	SK	73	56	52	56	67
FINLAND	FI	105	107	107	107	108
SWEDEN	SE	126	163	155	165	185
UNITED KINGDOM	UK	115	129	111	143	143
CROATIA	HR	71	59	58	68	53
The former Yugoslav Republic of Macedonia	MK	48	31	28	33	34
TURKEY	TR	74	57	49	66	68
SWITZERLAND	CH	124	155	169	145	142
ICELAND	IS	111	113	124	101	123
NORWAY	NO	124	133	136	129	135
Maximun		128	163	169	165	185
Minimum		48	31	28	31	34
Max./Min.		265	526	604	532	544

Table 1 above displays PLIs for GFCF, total construction and the three main components of construction works: residential buildings, non-residential buildings and civil engineering works.

The highest indices are found for Sweden that shows maximum PLIs for total construction (163), non-residential buildings (165) and civil engineering works (185).

Switzerland is the most expensive country for residential buildings, registering a PLI of 169.

The former Yugoslav Republic of Macedonia registers the lowest PLIs for total construction (31), residential buildings (28) and civil engineering works (34), while for non-residential buildings, the minimum is found for Bulgaria (31).

Box 2: Analytical categories, basic headings and bills of quantities in the 2005 survey

The scheme below shows the bills of quantities priced by countries for the 2005 construction survey and the basic headings and analytical categories that group them. The 15 bills of quantities and their alternatives were made up of 261 chapters (or major components) and 1,395 items (or elementary components).

I. Residential buildings

1. One or two dwelling buildings
 - a. Detached house
 - b. Portuguese house
 - c. Nordic house
2. Multi-dwelling buildings
 - a. Apartment
 - b. Apartment (updated)

II. Non-residential buildings

1. Industrial buildings
 - a. Factory building
 - b. Factory building (updated)
2. Commercial buildings
 - a. Office building
3. Agricultural buildings
 - a. Agricultural shed
4. Other non-residential buildings
 - a. Primary school

III. Civil engineering works

1. Transport infrastructures
 - a. Asphalt road
 - b. Concrete road
 - c. Bridge
 - d. Bridge (updated)
2. Pipelines
 - a. Sewer main

Price dispersion of construction products

Table 2: Coefficients of variation by product sub-groups for 2005

	Euro area (EA 13)	EU 15	EU 27	All 33
Total construction	24.4	23.6	39.8	41.8
Residential buildings	29.5	27.0	45.5	47.9
Non-residential buildings	22.4	23.2	39.8	40.5
Civil engineering works	17.3	24.5	29.6	33.0

Table 2 above, which is based on table 1, shows the price dispersion within the Euro area (EA 13), the EU 15, the EU 27 and all the 33 countries participating in the comparison programme. This price dispersion is measured, for each product group, by the coefficient of variation, i.e., the standard deviation expressed as a percentage of the arithmetic mean of the countries' PLIs.

The widest price dispersion is for residential buildings, for which the group of all 33 countries records a coefficient of variation of 47.9 per cent. The lowest dispersion for this category corresponds to EU 15, with a coefficient of 27.0 per cent.

The product sub-group for which price levels are more homogeneous is civil engineering works. In this category the Euro area shows, as usual, the lowest coefficient of variation, with 17.3 per cent,

while the highest dispersion is found again in the group of all the 33 countries, with a coefficient of 33.0 per cent.

For total construction, the Euro area shows a coefficient of variation of 24.4 per cent, while the group of 33 countries records 41.8 per cent.

For all product sub-groups table 2 shows that the Euro area and the EU 15 register relatively low coefficients of variation, while the EU 27 and the group of all 33 countries show the highest dispersion. The reason for this is that the latter two groups include countries that show both the highest and the lowest PLIs. This fact can be seen in table 1: countries like Switzerland or Norway show very high PLIs for all categories, while countries like the former Yugoslav Republic of Macedonia and Bulgaria register very low PLIs, also for all categories.

➤ ESSENTIAL INFORMATION – 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 PPPs which is available free of charge from the Eurostat website on

[EUROSTAT Website/Home page/Economy and finance/Publications/Eurostat-OECD Methodological manual on purchasing power parities](#)

Purchasing Power Parities (PPPs) are currency conversion rates that are applied to convert economic aggregates in national currency to an artificial common currency, called Purchasing Power Standard (PPS), which equalise the purchasing power of different national currencies.

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.

Price level indices are not intended to rank countries strictly. In fact, they only provide an indication of the comparative 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. It is, therefore, preferable to use these indices to divide countries into groups of a comparable level, as done in this article.

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.

Footnote 1: MK is a 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 United Nations.

Further information:

Data: [EUROSTAT Website/Home page/Economy and finance/Data](#)



Economy and finance

- Main economic indicators
- National accounts (including GDP)
- Government statistics
- Financial accounts
- Exchange rates
- Interest rates
- Monetary and other financial statistics



Prices

- Harmonized indices of consumer prices (HICP)
- Consumer price indices, 1985=100)
- Correction coefficients
- Purchasing power parities**

Journalists can contact the media support service:

Bech Building Office A4/125
L - 2920 Luxembourg

Tel. (352) 4301 33408
Fax (352) 4301 35349

E-mail: eurostat-mediasupport@ec.europa.eu

European Statistical Data Support:

Eurostat set up with the members of the 'European statistical system' a network of support centres, which will exist in nearly all Member States as well as in some EFTA countries.

Their mission is to provide help and guidance to Internet users of European statistical data.

Contact details for this support network can be found on our Internet site: <http://ec.europa.eu/eurostat/>

A list of worldwide sales outlets is available at the:

Office for Official Publications of the European Communities.

2, rue Mercier
L - 2985 Luxembourg

URL: <http://publications.europa.eu>
E-mail: info@publications.europa.eu

This SIF has been prepared with the help of Paul Thomas (Davis Langdon LLP).