



**Doc. 08/P2/03**

**Meeting of the Working Party on Purchasing  
Power Parities for Capital Goods – Construction  
day**

to be held in Luxembourg  
on 7 October 2008

Jean Monnet Building – Room M2  
starting at: 9.30 h

**Statistics-in-Focus publication**

**Paper for point 2.4 of the agenda**

**This document can be found on Circa:**  
[ESTAT/2008/WP Meetings/2008\\_10\\_WP\\_Capital\\_Goods](http://estat.ec.europa.eu/estat/2008/WP_Meetings/2008_10_WP_Capital_Goods)



## Wide spread in construction prices across Europe in 2007

**Price levels for construction in 2007 differed widely across Europe: in Iceland construction prices are 62% higher than the average of the 27 EU Member States, while in the former Yugoslav Republic of Macedonia prices are 66% lower than this average. Among the EU Member States, the most expensive country is Denmark (61% above the average) and the cheapest Bulgaria (58% below the average).**

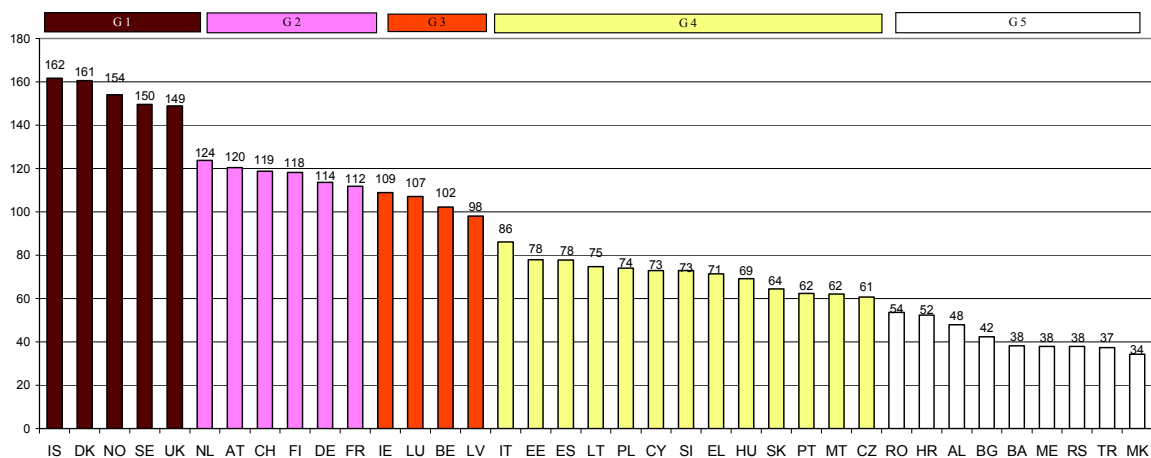
These are the main results of a survey of construction prices in 2007 across 37 European countries. This survey is part of the Eurostat – OECD Purchasing Power Parities (PPP) programme (see methodological notes). The 37 countries that participated in this survey are the 27 Member States, the three Candidate Countries (Croatia, the former Yugoslav Republic of Macedonia and Turkey), three EFTA countries (Iceland, Norway and Switzerland) and four Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro and Serbia).

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 and vice versa, if the price level index is lower than 100, then the country is relatively cheap compared to the EU average.

Figure 1 shows the 2007 construction PLIs. Northern European countries tend to have the highest prices while the south-eastern European countries have the lowest prices. Southern and central European countries tend to show price levels closer to the EU average.

**Figure 1: 2007 Price level indices for construction (EU27 = 100)**



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.

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## 2007 Price level indices for construction

The following groups can be distinguished according to countries' PLIs. They are also shown in Figure 1.

### **Group 1 ( $\geq 140$ )**

Iceland, Denmark, Norway, Sweden and United Kingdom

### **Group 2 ( $\geq 110$ and $< 140$ )**

Netherlands, Austria, Switzerland, Finland, Germany and France

### **Group 3 ( $\geq 90$ and $< 110$ )**

Ireland, Luxembourg, Belgium and Latvia

### **Group 4 ( $\geq 60$ and $< 90$ )**

Italy, Estonia, Spain, Lithuania, Poland, Cyprus, Slovenia, Greece, Hungary, Slovakia, Portugal, Malta and Czech Republic

### **Group 5 ( $\leq 60$ )**

Romania, Croatia, Albania, Bulgaria, Bosnia and Herzegovina, Montenegro, Serbia Turkey and the former Yugoslav Republic of Macedonia (FYROM)

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## Price dispersion

**Table 1: Variation coefficients by sub-groups for 2007**

	<b>Euro area (EA 13)</b>	<b>EU 15</b>	<b>EU27</b>	<b>All 37</b>
<b>GFCF</b>	12.9%	14.6%	19.8%	27.0%
<b>Total construction</b>	20.7%	24.9%	33.4%	43.4%
<b>Residential buildings</b>	24.7%	27.3%	37.8%	51.2%
<b>Non-residential buildings</b>	20.7%	25.2%	35.4%	42.9%
<b>Civil engineering works</b>	19.9%	26.6%	27.4%	37.4%

Table 1, which is based on table 2, shows the price dispersion within the Euro area (EA13), the EU15, the EU27 and all the 37 countries participating in the PPP programme. This price dispersion is measured, for each sub-group, by the variation coefficient, i.e. the standard deviation expressed as a percentage of the arithmetic mean of the countries' PLIs. The higher the coefficient, the higher is the price dispersion.

Looking at the product sub-groups, residential building is the category that shows the highest dispersion, reaching 51.2% when all countries are included. Civil engineering works show more homogeneous price levels, reaching a figure of 37.4% for the same group of countries.

Looking at groups of countries, the Euro area is the most homogeneous group with a coefficient of 20.7% for the

total construction category, while the group of 37 countries shows the highest dispersion, with a variation coefficient of 43.4% for total construction.

For reasons of comparison, the table also includes the variation coefficients for gross fixed capital formation (GFCF), one of the main components of GDP. GFCF is composed of construction and other investment goods (machinery, equipment, etc.). Construction constitutes on average about 13% of GDP in the countries included here (and 55% of GFCF). Price dispersion for the other investment goods is generally much lower than for construction, which is due to the higher labour content of construction and the wide spread in the salaries paid in the construction sector in the various countries.

Prices for other investment goods are presented in a separate Statistics-in-Focus publication.

## 2007 PLIs for Gross fixed capital formation, total construction and sub-groups

Table 2 gives the PLIs for gross fixed capital formation (GFCF), total construction and its sub-groups.

Iceland is the most expensive country for residential buildings, with a PLI of 213. This PLI is almost seven times higher than the PLI of the cheapest country for residential buildings, the former Yugoslav Republic of Macedonia, whose PLI is 31.

For non-residential buildings, the United Kingdom shows the highest PLI (167) while the cheapest country for this category is again the former Yugoslav Republic of Macedonia (35).

Finally, Sweden is the most expensive country for civil engineering works with a PLI of 180, whereas Bosnia and Herzegovina is the country that shows the lowest price level (41).

**Table 2: 2007 PLIs for GFCF, total construction and its components (EU27 = 100)**

Country	GFCF	Total Construction	Residential buildings	Non-residential buildings	Civil engineering works
BELGIUM	100	102	105	95	108
BULGARIA	60	42	40	42	50
CZECH REPUBLIC	74	61	52	59	80
DENMARK	132	161	173	147	155
GERMANY	106	114	119	116	97
ESTONIA	83	78	76	73	95
IRELAND	108	109	101	114	118
GREECE	83	71	68	73	82
SPAIN	85	78	74	80	87
FRANCE	107	112	110	115	111
ITALY	91	86	91	80	76
CYPRUS	82	73	69	69	89
LATVIA	98	98	87	96	128
LITHUANIA	79	75	76	68	94
LUXEMBOURG	104	107	109	93	144
HUNGARY	78	69	61	63	105
MALTA	75	62	56	54	99
NETHERLANDS	114	124	127	118	127
AUSTRIA	109	120	122	119	118
POLAND	82	74	63	66	119
PORTUGAL	76	62	54	63	81
ROMANIA	69	54	43	47	87
SLOVENIA	81	73	60	71	106
SLOVAKIA	79	64	63	59	83
FINLAND	113	118	114	113	140
SWEDEN	123	150	154	132	180
UNITED KINGDOM	124	149	122	167	171
CROATIA	65	52	53	51	59
The former Yugoslav Republic of Macedonia	50	34	31	35	42
TURKEY	57	37	34	40	44
SWITZERLAND	107	119	121	115	126
ICELAND	139	162	213	133	155
NORWAY	138	154	165	145	158
ALBANIA	64	48	44	45	63
BOSNIA AND HERZEGOVINA	58	38	35	42	41
MONTENEGRO	57	38	35	38	45
SERBIA	57	38	35	37	46
Maximum	139	162	213	167	180
Minimum	50	34	31	35	41
Max./Min.	277	470	681	479	443

## METHODOLOGICAL NOTES

### What are purchasing power parities (PPPs) and price level indices (PLIs)?

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

[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1073.46587259&\\_dad=portal&\\_schema=PORTAL&p\\_product\\_code=KS-BE-06-002](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1073.46587259&_dad=portal&_schema=PORTAL&p_product_code=KS-BE-06-002)

In their simplest form PPPs are nothing more than price relatives showing the ratio of prices in national currencies for an identical or comparable 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 to obtain the same quantity and quality (or volume) of hamburgers.

Price level indices as presented in this publication are the ratios of PPPs to exchange rates. PLIs provide a measure of the differences in price levels between countries by indicating for a given product group the number of units of the common currency needed to buy the same volume of the product group in each country. PLIs are not intended to rank countries strictly since they are statistical constructs rather than precise measures. Like all statistics, they are point estimates with a certain "error margin". It is, therefore, preferable to use PLIs to identify clusters of countries having a comparable price level.

### What are the main characteristics of the construction survey?

The construction survey is carried out every two years. This 2007 survey, the results of which are published in this SIF, was carried out in April and May 2007.

Countries collect prices for a list of "bills of quantities", which are comparable construction projects such as a detached house, an office building or an asphalt road. Each bill of quantity consists 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 soil, etc.). As it is very difficult to find similar construction project across countries, the bills of quantities provide identical works for countries to price.

The construction projects are divided into 3 sub-groups: residential buildings (comprising 4 bills of quantities: detached house, Portuguese house, Nordic house and apartment building), non-residential buildings (also comprising 4 bills of quantities: factory building, office building, agricultural shed and primary school) and civil engineering works (also 4 bills of quantities: asphalt road, concrete road, bridge and sewer main).

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 and the additional expenses incurred that build up to the project total cost paid by the customer.

### Further information

Data: [Eurostat Website: http://ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)

Select your theme on the left side of the homepage and then 'Data' from the menu.

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### 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/>

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