

# Food, beverages, tobacco, clothing and footwear

## Comparative price levels for five countries in the Western Balkan Region for 2003

### Statistics in focus

#### ECONOMY AND FINANCE

30/2005

#### Prices

Author

Anne Mari AUNO

### Contents

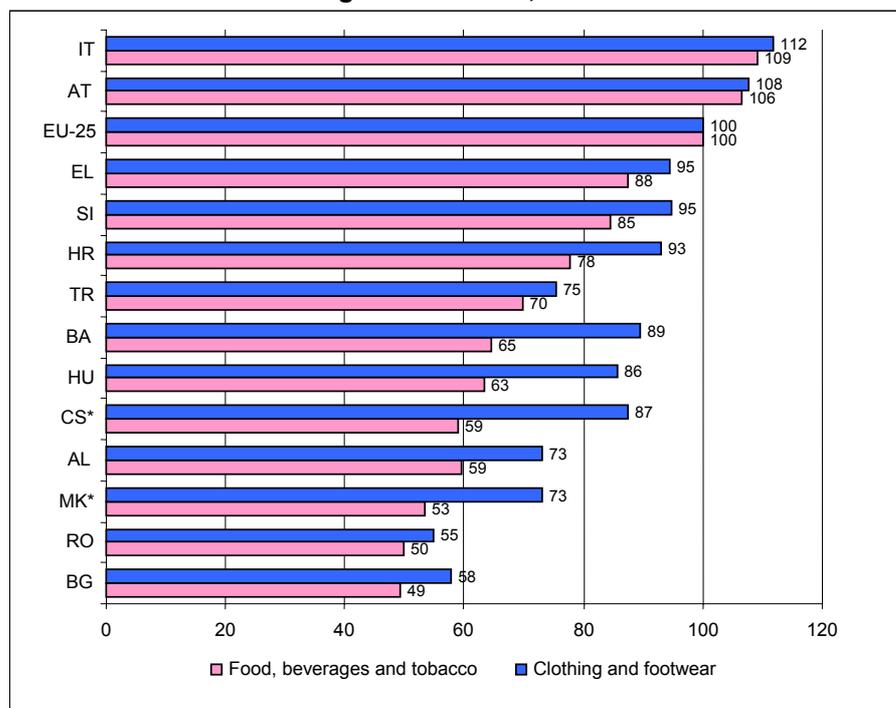
Price level indices for 2003 - A comparison of overall price levels for food, beverages and tobacco and clothing and footwear in five WBCs with respect to the EU ..... 2

Price level indices for 2003 - A comparison of product group price levels for food, beverages and tobacco and clothing and footwear in seven Western Balkan cities with respect to Ljubljana ..... 2

The price level indices (PLIs) presented in this article are from two price surveys that were carried out in the Western Balkan Region during 2003. The first survey was held in the spring of 2003 and collected prices for food, beverages and tobacco. The second survey was held in the autumn of 2003 and collected prices for clothing and footwear. The five Western Balkan Countries (WBCs) that conducted the surveys were Albania (AL), Bosnia and Herzegovina (BA), Croatia (HR), the former Yugoslav Republic of Macedonia (MK)\* and Serbia and Montenegro – excluding Kosovo (CS)\*. All of them collected prices in their capital cities with the exception of Bosnia and Herzegovina and Serbia and Montenegro. In Bosnia and Herzegovina, prices were collected in Banja Luka and Sarajevo. In Serbia and Montenegro, they were collected in Belgrade and Podgorica. These point-in-time city prices were converted to annual national prices using appropriate temporal and spatial adjustment factors.

Each survey covered some 350 products, enabling all five countries to price a sufficient number of products representative of their consumption pattern. The selection of products to be priced, the collection of prices and the verification of the prices collected were co-ordinated by the Statistical Office of the Republic of Slovenia within the framework of the European Comparison Programme (ECP). In addition to the five WBCs, the ECP covers another 31 countries: the 25 EU Member States, Bulgaria, Romania and Turkey, and Iceland, Norway and Switzerland. This article presents the PLIs with respect to both the EU average (that is, EU-25 = 100) and Slovenia (that is, Ljubljana = 100).

**CHART 1: Price level indices for food, beverages and tobacco and clothing and footwear, EU-25=100**



## Price level indices for 2003 - A comparison of overall price levels for food, beverages and tobacco and clothing and footwear in five WBCs with respect to the EU

Chart 1 presents overall PLIs for the two surveys - food, beverages and tobacco and clothing and footwear - with respect to the EU-25 average – that is EU-25=100. Besides the five countries in the Western Balkan Region and Slovenia, the chart also covers seven neighbouring countries: Austria (AT), Bulgaria (BG), Greece (EL), Hungary (HU), Italy (IT), Romania (RO) and Turkey (TR).

Chart 1 shows that the PLIs of the five Western Balkan Countries for food, beverages and tobacco and for clothing and footwear are below the EU-25 average. This means that food, beverages and tobacco and clothing and footwear are cheaper in these countries than they are in the European Union taken as a whole.

The price levels in the five countries for clothing and footwear are closer to the EU average than their price levels for food, beverages and tobacco are. Their PLIs for clothing and footwear range from 73 in the former Yugoslav Republic of Macedonia and Albania to 93 in Croatia, whereas their PLIs for food, beverages and tobacco range from 53 in the former Yugoslav Republic of Macedonia to 78 in Croatia.

Croatia is the most expensive of the five countries. Its price levels are closer to those of its neighbour, Slovenia. The least expensive of the five countries are Albania and the former Yugoslav Republic of Macedonia.

## Price level indices for 2003 - A comparison of product group price levels for food, beverages and tobacco and clothing and footwear in seven Western Balkan cities with respect to Ljubljana

Table 1 and Table 2 present PLIs for the product groups covered by the two surveys food, beverages and tobacco and clothing and footwear. The PLIs relate to the seven cities in

which prices were collected. Both tables have Ljubljana as the reference city – that is, Ljubljana = 100.

**Table 1: Price level indices for food, beverages and tobacco, Ljubljana = 100**

	Albania	Bosnia and Herzegovina		Croatia	The former Yugoslav Republic of Macedonia	Serbia and Montenegro	
	Tirana	Banja Luka	Sarajevo	Zagreb	Skopje	Belgrade	Podgorica
<b>Food, beverages, tobacco</b>	<b>70</b>	<b>77</b>	<b>76</b>	<b>92</b>	<b>63</b>	<b>62</b>	<b>77</b>
<b>Food</b>	<b>69</b>	<b>76</b>	<b>75</b>	<b>90</b>	<b>65</b>	<b>63</b>	<b>77</b>
Breads and cereals	76	85	77	88	79	69	79
Meat	63	79	78	88	59	61	75
Fish	72	75	76	79	69	77	77
Milk, cheese, eggs	67	80	75	99	76	72	84
Oils and fats	87	80	73	90	82	79	90
Fruit	62	71	71	96	52	57	76
Vegetables	60	57	66	81	48	44	65
Sugar, jam, honey, etc.	92	84	81	101	78	84	89
Food products n.e.c.	107	84	81	90	69	72	82
<b>Non-alcoholic beverages</b>	<b>116</b>	<b>98</b>	<b>95</b>	<b>102</b>	<b>71</b>	<b>82</b>	<b>92</b>
Coffee, tea and cocoa	142	92	87	92	58	74	89
Mineral water, soft drinks, etc.	99	104	103	110	87	89	94
<b>Alcoholic beverages</b>	<b>93</b>	<b>96</b>	<b>101</b>	<b>102</b>	<b>74</b>	<b>64</b>	<b>93</b>
<b>Tobacco</b>	<b>49</b>	<b>57</b>	<b>56</b>	<b>108</b>	<b>37</b>	<b>41</b>	<b>58</b>

The overall PLIs for food divide the seven cities into three clusters. Cities within a cluster have similar price levels. The three clusters are: Belgrade (63), Skopje (65) and Tirana (69); Banja Luka (76), Podgorica (77) and Sarajevo (75); and Zagreb (90). The same three clusters can be observed for tobacco.

The PLIs for non-alcoholic beverages also divide the cities into three clusters: Belgrade (82) and Skopje (71); Banja Luka (98), Podgorica (92), Sarajevo (95) and Zagreb (102); and Tirana (116). And the PLIs for alcoholic beverages divide them into two clusters: Belgrade (64) and Skopje (74); and Banja Luka (96), Podgorica (93), Sarajevo (101), Tirana (93) and Zagreb (102).

In general, Belgrade and Skopje are the least expensive cities and, with two exceptions, Zagreb is the most expensive. The exceptions are food products n.e.c. and coffee, tea and cocoa. In both cases, Tirana is the most expensive city. For most product groups the PLI of Zagreb is close to that of Ljubljana. This is not so for fish or for vegetables. For fish, Zagreb's PLI is much closer to the PLIs of the other six cities than it is to Ljubljana's.

The PLIs of the seven cities for fish are all close together with a spread of ten percentage points. This is the smallest spread of all product groups. On the other hand, their PLIs for vegetables and for fruit have two of the largest spreads at 37 and 44 percentage points respectively. The PLIs for tobacco have the largest spread. The lowest PLI for tobacco is in Skopje (37); the highest is in Zagreb (108).

Interestingly, the PLIs of the two cities in Bosnia and Herzegovina, Banja Luka and Sarajevo, are close for most product groups, whereas the PLIs of the two cities in Serbia and Montenegro, Belgrade and Podgorica, are generally different. Podgorica is noticeably more expensive than Belgrade. This can be explained partly by the different rates of indirect taxes levied in Serbia and Montenegro. Similarly, the differences in the PLIs for tobacco reflect the different national regulations and tax systems with regard to tobacco in the Western Balkan Region.

**Table 2: Price level indices for clothing and footwear, Ljubljana = 100**

	Albania	Bosnia and Herzegovina		Croatia	The former Yugoslav Republic of Macedonia	Serbia and Montenegro	
	Tirana	Banja Luka	Sarajevo	Zagreb	Skopje	Belgrade	Podgorica
<b>Clothing and footwear</b>	<b>77</b>	<b>94</b>	<b>95</b>	<b>98</b>	<b>77</b>	<b>85</b>	<b>100</b>
<b>Clothing</b>	<b>74</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>77</b>	<b>79</b>	<b>98</b>
Men's clothing	76	97	95	95	80	83	108
Women's clothing	75	91	95	98	78	76	97
Children's and infant's clothing	70	82	84	84	67	78	81
<b>Footwear</b>	<b>87</b>	<b>103</b>	<b>99</b>	<b>110</b>	<b>80</b>	<b>104</b>	<b>106</b>
Men's footwear	86	106	104	104	77	92	107
Women's footwear	93	104	106	123	88	115	107
Children's and infant's footwear	74	93	77	98	74	110	103

The overall PLIs for clothing divide the seven cities into two clusters: Belgrade (79), Skopje (77) and Tirana (74); and Banja Luka (92), Podgorica (98), Sarajevo (93) and Zagreb (94). This division also applies for women's clothing and children's and infant's clothing. For men's clothing there are three clusters. The third cluster comprises Podgorica with a PLI of 108 which makes it more expensive than Ljubljana.

The overall PLIs for footwear divide the seven cities into three clusters: Skopje (80) and Tirana (87); Banja Luka (103), Belgrade (104), Podgorica (106) and Sarajevo (99); and Zagreb (110). Those three clusters remain the same for women's footwear. For men's footwear and for children's and infant's footwear there are also three clusters but with different compositions. For men's footwear the three clusters are: Skopje (77); Tirana (86) and Belgrade (92); and Banja Luka (106), Podgorica (107), Sarajevo (104) and Zagreb (104). For children's and infant's footwear, the clusters are: Sarajevo

(77), Skopje (74) and Tirana (74); Banja Luka (93) and Zagreb (98); and Belgrade (110) and Podgorica (103).

In general, Skopje and Tirana are the least expensive cities and Podgorica and Zagreb are the most expensive. Both the overall PLIs for clothing and the overall PLIs for footwear of Banja Luka, Podgorica, Sarajevo and Zagreb are all close to that of Ljubljana.

The PLIs of the two cities in Bosnia and Herzegovina, Banja Luka and Sarajevo, are close for most product groups except for children's and infant's footwear for which the PLI for Banja Luka is sixteen percentage points higher than the PLI for Sarajevo. In Serbia and Montenegro, Podgorica is more expensive than Belgrade but with two exceptions. Belgrade is the more expensive for women's footwear and for children's and infant's footwear.

## ➤ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

**What are price level indices (PLIs)?** PLIs are the ratios of PPPs to exchange rates. By expressing the PPPs in a common currency, they provide a measure of the differences in price levels between countries by indicating for a given product or product group the number of units of the common currency needed to buy the same volume of the product or product group in each country. These indices provide a comparison of the countries' price levels with respect to a chosen "reference country". The reference country can be a country, a group of countries, such as the EU-25, or, as in this article, a city (Ljubljana). If the PLI of a country is higher than 100, it means that the price level in the country is higher than that in the reference country. In other words, it is more expensive than the reference country. Conversely, if its PLI is lower than 100, then its price level is lower than that of the reference country. In other words, it is less expensive than the reference country.

PLIs, and the PPPs on which they are based, are statistical constructs rather than precise measures and care should be taken when drawing conclusions from them. Like all statistics, they are point estimates lying within a range of estimates - the "error margin" - that include the true value. For this reason, PLIs should not be used to establish a strict ranking of countries. Instead, they should be used, as they are used in this article, to identify groups or clusters of countries having similar price levels. As countries do not necessarily fall easily and tidily into groups, judgment needs to be exercised when they do not.

**What are purchasing power parities (PPPs)?** In their simplest form PPPs are 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 Slovenia is 500 Slovenian tolar (SIT) and in Croatia it is 16 Kunas (HRK), the PPP for hamburgers between Slovenia and Croatia is 500 SIT to 16 HRK or 31 Slovenian tolar to the Kuna. This means that 31 SIT would have to be spent in Slovenia to obtain the same volume of hamburgers that one HRK purchases in Croatia. In their more complex form, PPPs refer to assortments or baskets of goods and services instead of a single good or service, but they are still price relatives. Hence, if the PPP for food between Slovenia and Croatia is 31 SIT to 1 HRK then 31 SIT would have to be spent in Slovenia to obtain the same volume of food that one HRK purchases in Croatia.

**What is the European Comparison Programme (ECP)?** The ECP provides annual price and volume comparisons of final expenditure on GDP for the European Union's Member States, Accessing and Candidate Countries and EFTA countries. It is managed and co-ordinated by Eurostat. Data collection is continuous, but cyclical, with each cycle or round of surveys taking five years to complete. Annual comparisons are made by "rolling" data collected in one year over to subsequent years. The current round has 2005 as its reference year. Price collection for the round started at the beginning of 2003 and will finish in 2006. But data collection, and the round itself, will not finish until 2007 when the final estimates of GDP and its component expenditures for 2005 become available. For the purposes of organising surveys to collect the prices of consumer goods and service, countries participating in the ECP are divided into country groups with one of the countries in the group acting as group leader. At present there are three country groups: the Northern Group, the Central Group and the Southern Group having, respectively, Finland, Austria and Portugal as their group leaders.

**Purchasing power parities for Western Balkan Countries (WBCs) is a pilot project** of the 2001 regional programme for statistics for the WBCs covered by the Council regulation for Community assistance on Reconstruction, Development and Stability (CARDS). The objective of the pilot project is to include the WBCs in the 2005 round of the ECP so as to familiarise their statistical agencies with the methodological and organisational framework used for international comparisons of GDP within the European Union and to develop their capacity to participate regularly in future rounds of the ECP. For this purpose, the WBCs constitute an independent subgroup of the Central Group. The link between two groups is provided by Slovenia – or, more precisely, the Statistical Office of the Republic of Slovenia - which participates in both groups and is the group leader of the Western Balkan Group. The pilot project is funded primarily by Eurostat and the regional CARDS programme. Technical oversight is provided by the OECD.

**Abbreviations:**

CS Serbia and Montenegro excluding Kosovo/UNSCR 1244  
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 United Nations.

**To know more about:**

“Eating, drinking, smoking - comparative price levels in EU, EFTA and Candidate Countries for 2003” Statistics in Focus, 30/2004, Eurostat, 2004“

“Clothing and footwear - comparative price levels in EU, EFTA and Candidate Countries for 2003” Statistics in Focus, 13/2005, Eurostat, 2005”

“PPP Methodological Manual (draft version)”

[http://forum.europa.eu.int/Public/irc/dsis/palojpi/library?l=/methodological\\_papers/ppp\\_manual&vm=detailed&sb=Title](http://forum.europa.eu.int/Public/irc/dsis/palojpi/library?l=/methodological_papers/ppp_manual&vm=detailed&sb=Title)

**Authors:**

Anne Mari Auno

This publication was prepared by Marjanca Gašić and Zdenka Repotočnik from the Statistical Office of the Republic of Slovenia with the assistance of David Roberts from the OECD

## ***Further information:***

---

### **Journalists can contact the media support service:**

Bech Building Office A4/017  
L - 2920 Luxembourg

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

E-mail: [eurostat-mediasupport@cec.eu.int](mailto:eurostat-mediasupport@cec.eu.int)

### **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: [www.europa.eu.int/comm/eurostat/](http://www.europa.eu.int/comm/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.eu.int>  
E-mail: [info-info-opoce@cec.eu.int](mailto:info-info-opoce@cec.eu.int)