

# Purchasing Power Parities and related economic indicators for EU, Acceding and Candidate Countries and EFTA<sup>1</sup>

*Revised 1995 – 2000, final 2001 and preliminary 2002 results*

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PURCHASING POWER  
PARITIES

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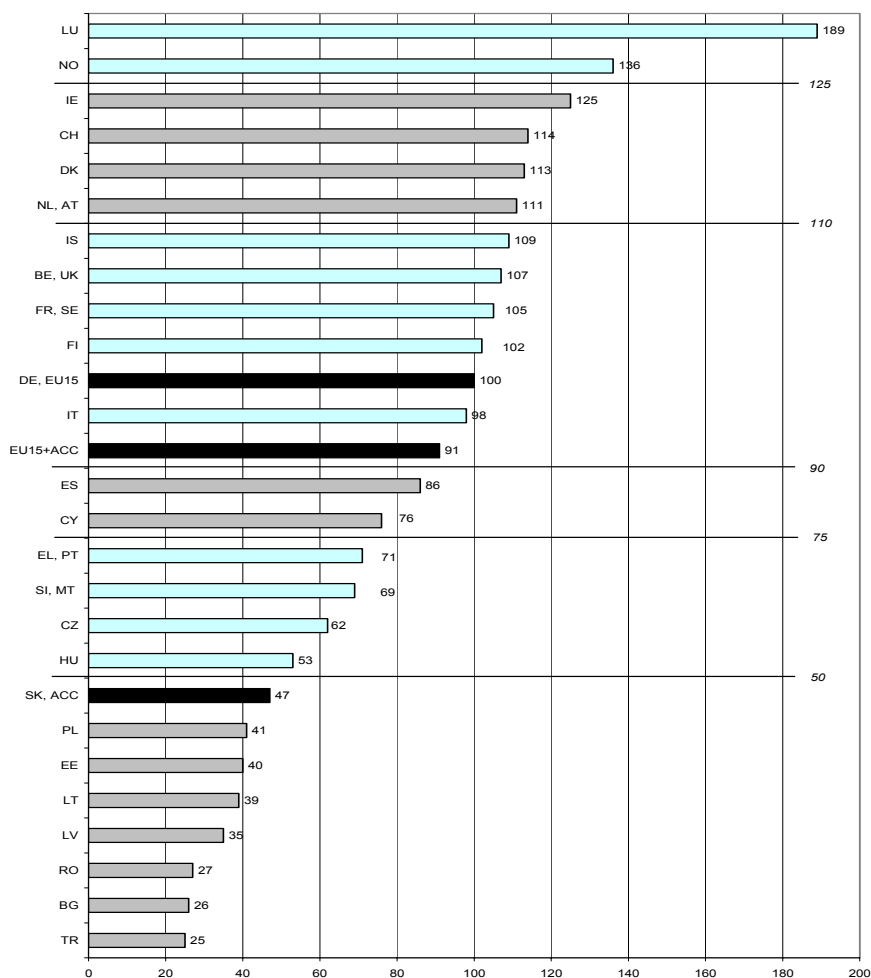
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This article presents Purchasing Power Parities and related economic indicators at the level of Gross Domestic Product (GDP) from 1995 to 2002 for the 31 countries<sup>(2)</sup> participating in the European Comparison Programme (ECP). The data in this publication are preliminary for 2002 and final for 2001. Furthermore, Eurostat together with the 31 participating countries has revised PPP series back to 1995 and first GDP level results of this exercise are published in this article.

The ECP – in which Eurostat closely co-operates with the OECD – is aimed at making annual volume comparisons of the main National Accounts (NA) aggregates; GDP and its components.

**Chart 1: Per capita volume index at the level of total GDP  
2002 preliminary results, EU-15=100**



<sup>(1)</sup> Excluding Liechtenstein

<sup>(2)</sup> The 15 EU Member States, the 10 Acceding Countries, the 3 Candidate Countries, Iceland, Norway and Switzerland



## Purchasing Power Parities

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

In accordance with the regular dissemination calendar, Eurostat presents final PPPs for 2001 and preliminary results for 2002. In addition, new revised data from 1995 to 2000 is published at the same time. The final data for 2002 will be published in

December 2004.

**Table 1** shows parities from 1995 to 2002 at level of total economy for the participating countries. These PPPs are used to convert countries' GDPs at national currencies to remove the effect of different price levels and then enabling meaningful volume comparisons between countries. The results of volume comparisons in per capita terms are presented in Table 2. Also price level indices for GDP that are calculated from the parities are shown in this article.

**Table 1: Preliminary 2002, final 2001 and revised 1995 – 2000<sup>(\*)</sup> PPPs at the GDP level (1 PPS in national currency / euro fixed for euro-zone countries)**

	1995	1996	1997	1998	1999	2000	2001	2002 P
Belgium (BE)	1.03907	1.02584	1.02813	1.03006	1.02622	1.00314	0.988758	0.982414
Denmark (DK)	9.68155	9.55462	9.48759	9.45389	9.18486	9.15142	9.18928	9.36701
Germany (DE)	1.15709	1.12825	1.11555	1.11342	1.09613	1.06841	1.07374	1.06797
Greece (EL)	0.652468	0.683618	0.707803	0.736387	0.743377	0.745268	0.763848	0.757344
Spain (ES)	0.798713	0.802646	0.809823	0.813059	0.800549	0.808001	0.824876	0.829035
France (FR)	1.08122	1.06154	1.03338	1.0278	1.01339	0.996174	0.990156	0.987225
Ireland (IE)	0.921153	0.922346	0.920986	0.966916	1.00619	1.03789	1.08385	1.09658
Italy (IT)	0.874431	0.888316	0.894844	0.887775	0.883737	0.879577	0.900828	0.917512
Luxembourg (LU)	1.13032	1.12429	1.12835	1.11957	1.07311	1.07629	1.09788	1.10472
Netherlands (NL)	1.01806	1.00525	1.00053	1.00784	1.01087	1.00662	1.0111	1.02686
Austria (AT)	1.0707	1.0511	1.03861	1.04075	1.01656	0.995166	1.0121	1.01583
Portugal (PT)	0.690212	0.699452	0.704981	0.715965	0.709011	0.708271	0.723928	0.732898
Finland (FI)	1.10416	1.08404	1.06423	1.07583	1.07253	1.06588	1.07384	1.09752
Sweden (SE)	10.619	10.4013	10.3927	10.4875	10.2031	10.0073	10.2777	10.4355
United Kingdom (UK)	0.703041	0.701561	0.691403	0.701482	0.70331	0.688622	0.686344	0.681802
Czech Republic (CZ)	:	:	:	:	:	15.4685	16.0592	15.8627
Estonia (EE)	5.16597	6.19569	6.71461	7.25438	7.3836	7.51307	7.96054	8.23014
Cyprus (CY)	0.46369	0.458816	0.458925	0.463009	0.46127	0.460767	0.45796	0.471634
Latvia (LV)	0.201895	0.2282	0.238825	0.246537	0.252936	0.256752	0.262342	0.265054
Lithuania (LT)	1.24951	1.47682	1.64207	1.70293	1.65345	1.60476	1.57013	1.55447
Hungary (HU)	68.5255	80.7386	93.1562	103.279	109.113	116.742	121.29	128.328
Malta (MT)	:	:	:	:	0.267413	0.266057	0.274913	0.274189
Poland (PL)	:	:	:	:	1.89337	1.97919	2.03532	2.03705
Slovenia (SI)	108.94	117.53	124.503	131.9	136.174	141.015	150.197	159.274
Slovakia (SK)	15.1252	15.3895	15.8377	16.4407	17.0788	17.4455	17.9135	17.9934
Iceland (IS)	84.7191	84.0487	84.7837	87.5689	88.5404	90.6221	97.7286	103.188
Norway (NO)	10.1591	9.97924	10.0656	10.3547	10.065	9.81796	10.0342	10.2147
Switzerland (CH)	2.26644	2.25431	2.14979	2.11939	2.12551	2.08373	2.10429	2.06796
Bulgaria (BG)	0.021032	0.045159	0.460039	0.560522	0.566259	0.589502	0.617685	0.646195
Romania (RO)	:	:	:	3389.45	4877.97	6845.49	9138.34	10913.7
Turkey (TR)	26143.1	45208.6	79931	138207	209495	294985	466819	668848

Notes: P preliminary, : data not available

(\*) For Candidate Countries the 1995-1998 PPPs are re-trapolated from 1999 using implicit deflator of GDP (if consistent ESA95 series are available)

### Box 1: Product level PPPs

In their simplest form PPPs are price relatives that show the ratio of the prices in national currencies of the same product in different countries. E.g., if the price of a loaf of bread in France is 1.87 euros and in the United Kingdom it is 0.95 pounds, then the PPP for bread between France and the United Kingdom is 1.97 euros to the pound. This means that for every pound spent on bread in the United Kingdom, 1.97 euros would have to be spent in France to obtain the same volume of bread. Therefore, to compare the volumes of bread purchased in the two countries, either the expenditure on bread in France can be converted to pounds by dividing it by 1.97 or the expenditure on bread in the United Kingdom can be converted to euros by multiplying it by 1.97. PPPs, however, are not published at the product level, but various higher levels of aggregation up to GDP. This is due to the fact that the PPP programme is built to deliver justifiable results only at highly aggregated level.

## Per capita GDP volume indices

The **per capita GDP volume indices**, shown in **Chart 1** and **Table 3**, represent the real volumes of production / total expenditure in per capita terms. The indices are expressed in relation to the European Union (EU15=100). If the per capita GDP volume index of a country is higher than 100, that country's level of production in per capita terms is higher than the EU average and vice versa.

Although the indices are available for all the participating countries they are not intended to rank countries strictly. They only provide an indication of the comparative order of magnitude of the per capita GDP volume in one country in relation to others. It is therefore preferable to use these indices for dividing countries into groups of a comparable level as shown in **Table 2**. To even underline this point, the countries are put in alphabetical order within the groups.

In 2002, based on the preliminary PPPs, the grouping of the participant countries was following:

**Group I** ( $\geq 126\%$  of the EU average): Luxembourg and Norway;

**Group II** ( $\geq 111\%$  and  $< 126\%$  of the EU average): Austria, Denmark, Ireland, the Netherlands, and Switzerland;

**Group III** ( $\geq 91\%$  and  $< 111\%$  of the EU average, i.e. close to the EU average): Belgium, Finland, France, Germany, Iceland, Italy, Sweden, and the United Kingdom;

**Group IV** ( $\geq 76\%$  and  $< 91\%$  of the EU average): Cyprus and Spain;

**Group V** ( $\geq 51\%$  and  $< 76\%$  of the EU average): the Czech Republic, Greece, Hungary, Malta, Portugal and Slovenia;

**Group VI** ( $< 51\%$  of the EU average): Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia and Turkey.

In 2002 the per capita GDP volume indices varied from 71 (Greece and Portugal) to 189 (Luxembourg) within the EU. The average real GDP volume per capita of the Acceding Countries was 47% per cent of the EU, ranging from 35% (Latvia) to 76% (Cyprus) in 2002. Cyprus was the only Acceding Country ranked ahead of current Member States and which exceeded the 75% threshold. For the remaining three EU Candidate Countries - Bulgaria, Romania and Turkey - the index showed a volume below 30% of the EU average.

The per capita GDP is for Luxembourg by far the highest among the participants. One of the reasons for this is the large share of cross-border workers in total employment: while contributing to GDP, they are not taken into consideration as part of the resident population which is used to calculate GDP per head.

GDP per capita volume indices are mainly constructed to compare countries within a given year and they should not be over-interpreted when compared over time, particularly when it comes to small changes from year to year. When compared over a longer time period the per capita GDP indices show a relatively stable pattern. Moving from a group to another is relatively rare. Over the entire period, from 1995 to 2002, only Ireland has significantly changed its grouping, moving from 90% of the EU average in 1995 to the 111%-125% group and almost to the highest group with an index of 125 in 2002. The Netherlands has always been close to the higher end of the average group, and since 2000 has moved into the 111%-125% of the EU average group.

The revised figures show that Germany, France, Italy and the United Kingdom recorded practically the same level, in relation to the EU average, of GDP per

**Table 2: Grouping of the ECP participating countries in GDP per capita in PPS, 1995 – 2002**

	1995	1996	1997	1998	1999	2000	2001	2002 P
126% and more of EU15 average	LU, CH	LU, NO	LU, CH, NO	LU	LU, NO	LU, NO	LU, NO	LU, NO
111% - 125% of EU15 average	DK, IS, NO, AT	DK, CH, IS, AT	DK, IS, AT	DK, CH, IS, NO, AT	DK, CH, IS, IE, AT	DK, CH, IS, IE, NL, AT	DK, CH, IS, IE, NL, AT	DK, CH, IE, NL, AT
91% - 110% of EU15 average	BE, DE, FR, IT, NL, FI, SE, UK	BE, DE, FR, IE, IT, NL, FI, SE, UK	BE, DE, FR, IE, IT, NL, FI, SE, UK	BE, DE, FR, IE, IT, NL, FI, SE, UK	BE, DE, FR, IT, NL, FI, SE, UK	BE, DE, FR, IT, FI, SE, UK	BE, DE, FR, IT, FI, SE, UK	BE, DE, FR, IS, IT, FI, SE, UK
76% - 90% of EU15 average	ES, IE,	ES	ES	ES	ES	ES, CY	ES, CY	ES, CY
51% - 75% of EU15 average	EL, PT, CY, SI	EL, PT, CY, SI	EL, PT, CY, SI	EL, PT, CY, SI	EL, PT, CY, MT, SI	EL, PT, CZ, MT, SI	EL, PT, CZ, HU, MT, SI	EL, PT, CZ, HU, MT, SI
50% and less of EU15 average	BG, EE, HU, LV, LT, SK, TR	BG, EE, HU, LV, LT, SK, TR	BG, EE, HU, LV, LT, SK, TR	BG, EE, HU, LV, LT, RO, SK, TR	BG, EE, HU, LV, LT, PL, RO, SK, TR	BG, EE, LV, LT, PL, RO, SK, TR	BG, EE, HU, LV, LT, RO, SK, TR	BG, EE, LV, LT, PL, RO, SK, TR

Note: P preliminary

capita in PPS for the years 1997 to 2000. Yet there are significant developments for the individual countries if one looks over the whole period 1995 to 2002. For the United Kingdom an upward tendency is visible, while Germany and Italy show slight downward tendencies. France, on the other hand, remains at about 3 to 5 % points above the EU average in all years. However, all four countries belong to the same group in all years.

For Portugal, Greece and Spain a certain catching-up with the average of the EU can be observed between 1995 and 2002. The same can be said about a number of Acceding Countries, namely the three Baltic States, Hungary, Slovenia and Slovakia.

In summary, two major observations can be made concerning the revision and resulting series. Firstly, the level of GDP per head in PPS has been revised consistently for the years under revision, reflecting better now, in individual years, countries' relative position to the EU average and to other countries than in the results before (e.g. Denmark, Germany, France, Sweden, Iceland and Switzerland). Secondly, new data show much more logical development over time, even if over time comparison is not the main purpose for which PPPs have been developed. Formerly observed "jumps", have been removed successfully (e.g. Belgium, Denmark, France and the United Kingdom). It can be concluded that the revision has well addressed the criticism raised with regard to the reliability of PPPs and related economic indicators, particularly when it comes to the development over time in comparison with the National Accounts.

**Table 3: Per capita volume indices of GDP in PPS 1995 – 2002\*\*, EU15=100**

	1995	1996	1997	1998	1999	2000	2001	2002P
<b>EU15+ ACC</b>	91*	91*	91*	91*	91*	91	91	91
BE	109	107	107	105	105	106	107	107
DK	113	114	114	113	116	116	115	113
DE	108	107	105	104	103	102	100	100
EL	65	65	66	65	65	66	67	71
ES	79	79	80	81	84	83	84	86
FR	104	103	104	104	104	104	105	105
IE	90	94	102	106	111	115	118	125
IT	104	104	102	103	102	101	100	98
LU	161	161	168	175	189	199	194	189
NL	109	109	110	110	110	111	113	111
AT	114	115	113	113	114	114	112	111
PT	66	66	67	68	70	70	71	71
FI	96	96	101	103	102	104	104	102
SE	107	107	106	104	108	109	106	105
UK	100	101	104	103	103	104	105	107
<b>ACC</b>	43*	44*	44*	44*	45*	45	46	47
CZ	:	:	:	:	:	60	61	62
EE**	31	32	35	36	35	37	39	40
CY**	75	74	73	73	74	76	78	76
LV**	26	27	29	30	30	31	33	35
LT**	31	32	34	35	34	35	37	39
HU**	45	45	46	47	48	49	51	53
MT	:	:	:	:	71	71	70	69
PL	:	:	:	:	41	41	41	41
SI**	61	62	64	64	67	66	68	69
SK**	40	42	43	43	43	44	45	47
<b>EFTA</b>								
IS	113	116	115	117	116	115	115	109
NO	120	127	129	121	129	147	144	136
CH	128	123	125	124	120	119	116	114
<b>CC3</b>								
BG**	29	26	24	24	24	24	26	26
RO**	:	:	:	24	23	23	24	27
TR**	28	29	30	29	27	28	24	25

Notes: ACC = Acceding Countries  
P preliminary, : data not available  
\* Estimated by Eurostat  
\*\* Data for 1995 – 1998 based on reinterpolated PPPs

### Box 2: Differences in the status of data in the publication

In this article, as distinct from standard PPP publications, three different types of data are presented at the same time. In addition to normal preliminary and final data stemming from the regular PPP dissemination calendar revised data series are put forward.

The data for 2002 presented in this paper have a preliminary character. Preliminary results for every given year are published 12 months after the end of the reference year. At that time, the results of the two consumer price surveys for the reference year as well as preliminary data for all other input data are available.

Final data are published 24 months after the end of the reference year. Collected prices do not change between the preliminary data and the final data but all other input data and particularly GDP expenditure weights that are used in aggregation of PPPs are subject to revisions. 24 months after the end of the reference year other input data have stabilized sufficiently for the calculation of the final PPPs. In this publication 2001 PPPs are final.

The data referring to years from 1995 to 2000 are revised. The revision of PPPs was done at the most detailed level for all of the 31 countries from 1999 to 2000 and only for the EU member states and the EFTA countries from 1995 to 1998. For the rest of the countries these years were reinterpolated using 1999 revised PPP and implicit price deflator of GDP if consistent series were available. The data differences are summarised as follows:

Country group	1995-2000	2001	2002
Member States and EFTA	▪ Results of the revision	▪ Final data	▪ Preliminary data
Acceding and Candidate Countries	▪ 1999 - 2000 results of the revision; ▪ 1995 - 1998 reinterpolated PPPs, where the necessary data were available for the calculation		

## Price level indices, price dispersion and price convergence of GDP

**Price level indices** (PLIs) are obtained as the ratio of PPP to the exchange rate for each country and they present a comparison of the price levels with respect to the EU average. At the level of GDP a value over 100 indicates a higher general price level than the EU average; a value under 100 indicates a lower general price level. In a country with an index above 100, the use of exchange rates would overestimate the volumes; while the opposite holds if the PLI is lower than 100.

PLIs also indicate the degree to which a country's exchange rate reflects its general price level vis-à-vis the general price level of the reference country: a value over 100 indicates that the exchange rate understates the general price level; a value under 100 indicates that the exchange rate overstates the general price level.

**Table 4** shows PLIs for total GDP for 1995 - 2002. Like the volume indices PLIs are not intended to rank countries strictly, but to provide the order of magnitude.

In 2002 the PLIs were between 73 (Portugal) and 126 (Denmark) among the EU Member States. When considering all participating countries in the ECP the range was much wider: from 33 (Bulgaria) to 141 (Switzerland).

The Acceding Countries and the three Candidate Countries all have PLIs well below the EU-15 average; the highest index being that of Cyprus (82 in 2002). On average the price level of the Acceding Countries was 52% of the EU.

In general, PLIs for GDP are much less dispersed in the EU than in the whole set of 31 countries or in the Acceding Countries. This is confirmed by coefficient of variation, which is a measure of dispersion, of different country groups. The coefficient was 15% for the EU and 23% for the Acceding Countries in 2002. For the whole set of countries the price dispersion was noticeable higher, showing 38% in 2002.

From the now revised time series it can be seen that the PLIs are moving closer to each others – general price levels of all participating countries have been converging over the eight years displayed in Table 2. This can be verified also from the coefficients of variations, which went down, for example for the Acceding Countries from 40% (1995) to 23% (2002) (estimated figures).

The 1995 – 2002 series show that there is a tendency in the EU countries that the countries with higher price levels have experienced decline in the index while as low price level countries have witnessed an increase in their general price level in relation to the EU. For example Germany started from 121% in 1995 and is now at 107% of the EU average.

In general, the Acceding Countries have witnessed increase of their relative price levels over the period from 1995 to 2002, and they are getting closer to the EU average though in Slovenia the general price level has been very stable in relation to the EU average. However, the deterioration of their relative position in price levels has been generally compensated by the increase in real volumes as shown in the previous section of this article.

**Table 4: Price level indices of GDP 1995 - 2002, EU15=100**

	1995	1996	1997	1998	1999	2000	2001	2002P
<b>EU15+ ACC</b>	95*	95*	95*	95*	96*	96	96	96
BE	109	105	102	102	103	100	99	98
DK	132	130	127	126	124	123	123	126
DE	121	116	111	111	110	107	107	107
EL	73	76	78	76	78	75	76	76
ES	82	83	81	81	80	81	82	83
FR	109	107	103	102	101	100	99	99
IE	89	92	97	97	101	104	108	110
IT	79	88	90	88	88	88	90	92
LU	118	115	112	111	107	108	110	110
NL	107	104	100	100	101	101	101	103
AT	112	108	103	103	102	100	101	102
PT	71	72	71	71	71	71	72	73
FI	115	111	108	107	107	107	107	110
SE	114	122	120	118	116	118	111	114
UK	85	86	100	104	107	113	110	108
<b>ACC</b>	38*	40*	42*	43*	45*	48	52	52
CZ	:	:	:	:	:	43	47	51
EE**	34	41	43	46	47	48	51	53
CY**	78	78	79	80	80	80	80	82
LV**	29	33	36	37	40	46	47	46
LT**	24	29	36	38	39	43	44	45
HU**	42	42	44	43	43	45	47	53
MT	:	:	:	:	63	66	68	67
PL	:	:	:	:	45	49	55	53
SI**	70	68	69	71	70	68	69	70
SK**	39	40	42	42	39	41	41	42
<b>EFTA</b>								
IS	100	99	105	110	115	125	112	120
NO	123	122	126	122	121	121	125	136
CH	147	144	131	131	133	134	139	141
<b>CC-3</b>								
BG**	24	20	24	28	29	30	32	33
RO**	:	:	:	34	30	34	35	35
TR**	44	44	47	47	47	51	42	46

Notes: ACC = Acceding Countries

P preliminary, : data not available

\* Estimated by Eurostat

\*\* Data for 1995 – 1998 based on retranslated PPPs

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## Revision of Purchasing Power Parities 1995-2000

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PPPs and related economic indicators for 1995 to 2000 have been revised by Eurostat. The first results from the revision are now available and incorporated in to the tables of this publication. More detailed results at the level of analytical categories will be published in 2004.

This major revision, involving 16 months of work by Eurostat and the national statistical institutes of the 31 countries participating in the Eurostat co-ordinated group of the European Comparison Programme, was undertaken in order to bring the underlying data in line with the current version of the European System of Accounts (ESA95)<sup>(3)</sup>.

The overall PPP calculations depend on three forms of input: the price survey results, GDP weights and other data, e.g. rents and salaries in General Government. Of these, only price survey results do not change afterwards. Instead, all National Accounts related input data are subject to regular revisions. In addition, there was a major National Accounts revision; the switch from ESA79 to ESA95.

The introduction of ESA95 did not occur at once in all its parts and not in all countries at the same point in time. This step by step introduction of ESA95 in the Member States led to a multitude of breaks in the time series and affected the comparability of the PPP based indicators over time or even between countries within one given year. The initially established PPPs were not anymore consistent with the data to which they were applied to and from which they were partially derived.

The year 2000 was taken as a starting point for the revision because for the majority of the participating countries, the reference year 2000 was the first year where the National Accounts data was fully ESA95 based.

At the same time as making the revision the opportunity was taken of correcting inconsistencies detected in the process of reviewing the price and other input data and calculating revised PPPs. In particular, the consistent application and interpretation of the Eurostat guidelines for pricing and collection of other input data over the whole period 1995 to 2000 by the individual participating countries had an important effect.

For the EU Member States and the three EFTA countries the revision was made at the same level of detail as the regular annual PPP calculation for the years 1995 to 2000. Earlier years will be revised by extrapolation using implicit deflators from National Accounts data or CPIs later on.

In the case of the EU Candidate Countries, a detailed revision of the PPP was limited to the years 1999 and 2000 because of the absence of detailed input data; for the moment their ESA95 base NA series are relatively short and, even more importantly, they have fully participated in the PPP price surveys only from the reference year 1999. For the EU Candidate Countries PPPs from 1995 to 1999 were retrapolated using 1999 PPPs and GDP implicit price deflator.

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## Use of Purchasing Power Parities

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PPP is not a concept that is immediately and easily understood. This has sometimes generated misunderstandings as PPPs are used for purposes for which they are not suited or PPPs are not used even when they are the right concept.

In essence PPPs are price comparison *in space* and therefore the most recommended applications are spatial ones – i.e. comparisons of PPP converted indicators across countries at a given point in time. The most common usages of PPPs are to generate comparable volume measures per capita terms across countries and to calculate general price level indices – like in this publication. They can be also used in other areas such as labour productivity comparisons at GDP level and in measuring the

relative size of economies.

The differences in values of GDP between countries, even when revalued in a common currency using exchange rates, do not only correspond to a “volume of goods and services” component but also to a “level of prices” component, which can sometimes assume sizeable proportions.

Exchange rates are determined by many factors, which reflect demand and supply on the currency markets, such as international trade and interest rate differentials. In other words, exchange rates usually reflect other elements than price differences alone. To obtain a pure comparison of volumes, it is essential to use special conversion rates (spatial

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<sup>(3)</sup> ESA95 (European System of Accounts 1995; Commission Regulation (EC) 2223/1996 of 25 June 1996) is the current European methodological framework for compiling National Accounts.

deflators) which remove the effect of price level differences between countries. Purchasing Power Parities (PPPs) are such currency conversion rates.

Despite being designed for spatial comparisons, PPPs and related economic indicators can be used for inter-temporal comparisons but with certain limitations and with necessary care. Comparing, for example, a sequence of PPP converted GDPs means that prices and price structures are allowed to vary over time – in normal constant price volume series that is not the case.

In addition, the sampling of items and price collection for PPPs are not designed to capture the pure price change over time like in the case of consumer price indices but price differentials over space. In effect, PPP converted GDPs should be understood more like current price volume series. Though when presented in index form and per capita terms they can be used as an analytical tool also in over time comparisons, but with caution.

Finally, it needs to be underlined that PPP-based indices cannot be used to establish a strict ranking of countries because PPPs are statistical constructs rather than precise measures. They provide only an indication of the relative order of magnitude in a country in relation to others in the comparison. The statistical uncertainties surrounding PPPs depend on the reliability of the expenditure weights and the price data as well as to the extent to which the particular goods and services selected for pricing by participating countries truly represent the price levels in each country. Therefore, these indicators are best used to assign countries to groups as, for example, in all Eurostat and OECD publications on PPP.

In Table 5 below the uses of PPP-based data are divided into three groups, “recommended uses”, “uses with limitations” and “non-recommended uses” in a summary form. More information on the revision of PPPs and uses of PPP converted data are available on request from Eurostat

**Table 5: Uses and limitations of PPP-based data**

<b>Recommended uses</b>	<ul style="list-style-type: none"> <li>▪ Spatial volume comparisons of GDP, GDP per head, GDP per hour worked, size of economies</li> <li>▪ Grouping of countries by volume index of GDP</li> <li>▪ Spatial comparisons of relative price levels</li> </ul>
<b>Use with limitations</b>	<ul style="list-style-type: none"> <li>▪ Inter-temporal analysis of relative GDP per capita or relative prices</li> <li>▪ Analysis of price convergence</li> <li>▪ Cost of living index across countries</li> <li>▪ Use of PPP established for expenditure categories for the deflation of other values, as e.g. household income.</li> </ul>
<b>Non-recommended uses</b>	<ul style="list-style-type: none"> <li>▪ As a precision tool to establish rankings between countries</li> <li>▪ As a way of constructing national growth rates</li> <li>▪ As a measure to generate output and productivity comparisons by industry (unless there are industry-specific PPPs)</li> <li>▪ As a measure to undertake price level index comparisons at detailed level.</li> <li>▪ As an indicator for the over- or undervaluation of a currency</li> <li>▪ As equilibrium exchange rates</li> </ul>

## ➤ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

### Publication calendar 2004:

During the calendar year 2004 the following PPP related publications, among others, are planned:

- May 2004 – Revision of the PPPs 1995 - 2000 – detailed results
- May 2004 – Nowcast of the PPP 2003
- September 2004 – Methodological manual on PPPs
- December 2004 – Final PPP data 2002 and preliminary data 2003

### To know more about:

“Purchasing Power Parities and Real Expenditures, 1999 Benchmark Year”, OECD 2002

“Methodological note for the revision of the PPP from 1995 to 2000” available on request at Eurostat

# Further information:

## ➤ Databases

New Cronos, Theme 2, Domain: price

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