

Methodology Manual



Remuneration and Pensions

Calculation of the Joint Index in accordance with Annex XI of the EU Staff Regulations

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Main Text

Preface

This document provides a description of the background, theory and practice of calculations relating to the establishment of an index to monitor the evolution of consumer prices in headquarters duty stations¹. This is an essential component for:

- the calculation of the annual adjustment of the remuneration of EU officials based in headquarters duty stations (in accordance with the principle of parallelism with the movement in real-terms of the remuneration of national civil servants)²;
- the calculation of the correction coefficients to adjust the remuneration of EU officials based in duty stations outside headquarters duty stations (in accordance with the principle of equivalence of purchasing power)³.

These adjustments directly determine the remuneration of EU-staff and, by analogy, many others. They are therefore of great interest to many groups, including the administrations of the EU Institutions, staff representatives, the Member States, other international organisations, etc.

Eurostat therefore considers it important to provide a comprehensive document, where people interested in this subject can find information on the legal background, on the basic principles and definitions and also on details of the practical procedures concerning this issue.

This document is based on the Staff Regulations of Officials of the European Communities⁴ and other relevant elements of the legal framework. The Working Group on Articles 64 and 65 is a platform for the discussion of the methodology. It comprises Member States delegations and representatives of the Commission and it is chaired by Eurostat.

As the remuneration system for EU officials and the methodological details for the estimation of the index develop and evolve over time, this document has to be seen as a snapshot of the current state of the art. It updates and replaces all previous versions of this manual.

¹ i.e. Brussels and Luxembourg

² See separate manual (doc.A6465/14/26)

³ See separate manuals for Intra-EU (doc.A6465/14/59) and Extra-EU (doc.A6465/14/60)

⁴ Council Regulation No 259/68 as modified most recently by Regulation (EU, Euratom) No 1023/2013 of the European Parliament and of the Council of 22 October 2013

History

With effect from 1.1.2014, a “Joint Belgium-Luxembourg Index” (JBLI) is to be calculated in accordance with Annex XI of the Staff Regulations as amended by Regulation 1023/2013 adopted 22.10.2013.

For the reference period 1.1.2013 to 31.12.2013 the Article 64 and 65 working group agreed at March 2013 meeting to use the Belgian HICP.

For the reference period 1.7.2004 to 31.12.2012 a “Brussels International Index” (BII) was calculated, in accordance with the Staff Regulations Annex XI as amended by Regulation 724/2004 in force from 1.5.2004 to 31.12.2012. Details of the calculation of this Brussels International Index are described in the methodology manual, document A64/11/27 chapter II⁵.

For the reference period 1.7.1991 to 30.6.2004 a “Joint Index” (JI) was calculated, in accordance with the Staff Regulations Annex XI as amended by Regulation 3830/1991 in force from 1.7.1991 to 30.6.2001, whose duration was subsequently extended from 1.7.2001 to 30.6.2003 by Regulation 2805/2000 and from 1.7.2003 to 30.6.2004 by Regulation 2181/2003. Details of the calculation of the Joint Index are described in the methodology manual, document KS-BE-02-005-EN-N chapter II⁶.

For reference periods prior to 1.7.1991 a different approach applied.

⁵ In essence, the calculation combined HICP sub indices for 69 basic headings, supplemented by Brussels CPI sub indices for 9 basic headings where capital city price variation was known to differ significantly from national average price variation, and rent price index derived from annual staff housing survey for remaining 2 basic headings, aggregated with specific consumption expenditure pattern of expatriates from periodic staff family budget survey.

⁶ In essence the calculation combined Brussels CPI sub indices for 82 basic headings, supplemented with rent price index derived from annual staff housing survey for remaining 2 basic headings, aggregated with specific consumption expenditure pattern of expatriates from periodic staff family budget survey.

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1 Introduction

Article 1(2) of Annex XI of the EU Staff Regulations specifies that:

“Eurostat shall draw up an index to measure changes in the cost of living for officials of the Union in Belgium and Luxembourg. That index (hereinafter the ‘Joint Index’) shall be calculated by weighting national inflation (as measured by the Harmonised Indices of Consumer Prices (HICP) in the case of Belgium and the Consumer Prices Index (CPI) in the case of Luxembourg) between June of the previous year and June of the current year according to the distribution of the staff serving in those Member States.”

The Joint Belgium-Luxembourg Index (JBLI) is a Laspeyres type index. Its aim, as stated in the Staff Regulations, is *“to measure changes in the cost of living for officials of the Union in Belgium and Luxembourg”*. All the statistical problems concerning the establishment of the JBLI are examined by the Working Group on Article 64 and 65 of the Staff Regulations, as laid down in Article 13 of Annex XI.

The JBLI is calculated twice per year:

- a) for the annual adjustment of the remuneration (12 months: change June t / June t-1) and ;
- b) for the intermediate adjustment (6 months: change December t / June t).

The index is used in two ways:

- 1) for the annual adjustment of remuneration (combination of specific indicator and joint index);
- 2) for the calculation of correction coefficients.

In accordance with decision at the March 2014 meeting of the Article 64 and 65 Working Group, in both cases the index is required to be calculated at detailed level (and then aggregated with consumption expenditure weights to produce an overall index).

2 Annual calculation

The components of the index are:

- HICP for Belgium, as established by national authority and published on Eurostat website (sub indices at maximum level of detail, with conversion table to the agreed 80 basic headings classification);
- CPI for Luxembourg, as established and published on website of national statistical office (sub indices at maximum level of detail, with conversion table to the agreed 80 basic headings classification);
- Total staff numbers in Brussels, as provided by Commission internal services;
- Total staff numbers in Luxembourg, as provided by Commission internal services;
- A set of consumption expenditure weights relating to the agreed 80 basic headings classification.

2.1 80 basic headings and 12 main groups

For the calculation of the JBLI to be used as an input in the calculation of correction coefficients, results for a basic heading classification with 80 positions are required.

The same classification is used for Intra-EU⁷ purposes and for Extra-EU⁸ purposes.

The list of 80 basic headings and 12 main groups is included as **appendix 2**.

2.2 Source data for Belgium HICP

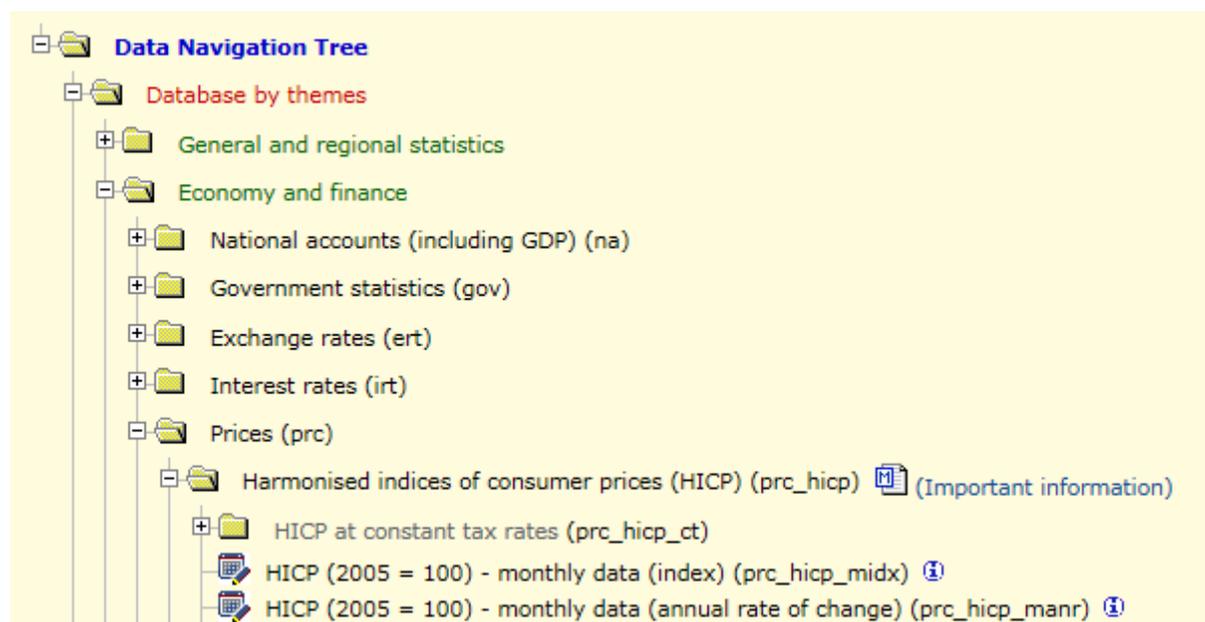
The Belgium HICP is established in accordance with framework regulation 2494/1995 and subsequent implementing measures concerning harmonised indices of consumer prices. The latest compendium of HICP reference documents was published as document KS-RA-13-017-EN in July 2013, and is available to download from the Eurostat website. The 2013 compendium replaces the first edition dating from 2002.

The information is directly received by Eurostat from the Belgian authorities (*Service public fédéral Économie, P.M.E., Classes moyennes et Énergie, Direction générale Statistique et Information économique, "SPF Économie DGSIE"*). A time series of the index values is available to download from the following internet address:

⁷ This level of 80 basic headings is the same used to compare the relative cost of living of European institution officials in Brussels and in each of the Member State capitals and other places of employment (Intra-EU correction coefficients). The calculation of these correction coefficients is described in a separate manual. For the whole list of basic headings (doc.A6465/14/59).

⁸ This level of 80 basic headings is the same used to compare the relative cost of living of European institution officials in Brussels and in each of the places of employment outside the Union (Extra-EU correction coefficients). The calculation of these correction coefficients is described in a separate manual (doc.A6465/14/60).

http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database



It is important that indices established on a consistent basis are used (e.g. in the event of rebasing).

The information is then converted to the agreed 80 basic headings classification.

2.3 Source data for Luxembourg CPI

The current Luxembourg national index of consumer prices came into effect in 1997. It complies with the HICP except that its weighting structure excludes the consumer spending of non-residents on Luxembourg territory. It covers 255 basic headings, grouped in accordance with COICOP.

The information is established by the Luxembourg authorities (*Institut national de la statistique et des études économiques, "Statec"*). A time series of the index values is available to download from the following internet address:

<http://www.statistiques.public.lu/en/economy-finances/consumer-prices/ipcinflation/>

It is important that indices established on a consistent basis are used (e.g. in the event of rebasing).

The information is then converted to the agreed 80 basic headings classification.

2.4 Source data for staff numbers

The Belgian and Luxembourg indices are combined to produce a weighted average, calculated using the numbers of EU staff working in Brussels and Luxembourg as weights.

Information about the numbers of EU officials working in Brussels and Luxembourg (all institutions combined, all categories) is extracted from the Eurostat PSEO database, which compiles information provided annually at 31 December about staffing levels by PMO.

The staff numbers at the base period are used (i.e. for a movement between time t-1 and time t, the staff numbers available for time t-1 are used).

In case of absence of data about staffing levels from PMO, a standardised 80 (Brussels) : 20 (Luxembourg) ratio will be applied as weights for the JBLI calculation.

2.5 Source data for expenditure weights

In order to calculate the overall change in the cost of living for EU officials in Brussels and Luxembourg, weights have to be applied to each of the 80 basic heading indices according to their relative importance in the consumption basket, to produce an aggregate.

The expenditure weights are derived from the Family Budget Surveys⁹ (FBS) held periodically amongst the families of EU and International staff living in Brussels. These surveys are organised approximately every 5 years: the most recent survey was organised during 2017¹⁰. In the absence of a survey amongst staff in Luxembourg, the resulting structure reflects the consumption of the average international civil servant in Brussels. These are the same Brussels consumption expenditure weights as are used in the calculation of correction coefficients.

Following the organisation of a survey amongst staff in Luxembourg an average structure should be calculated which combines Brussels and Luxembourg data using the number of staff working in Brussels and in Luxembourg as weights. In case of absence of data about staffing levels from PMO, a standardised 80 (Brussels) : 20 (Luxembourg) ratio will be applied as weights.

Between periodic surveys, there is no price updating of the expenditure weights.

For details about Family Budget Surveys, please see the methodology manual for the calculation of Intra-EU correction coefficients.

2.6 Hypothetical global calculation

Due to the calculation method, it is possible that this hypothetical global index calculation will not give an identical value to the global index produced by aggregation of the detailed indices which is the approved method described in **section 2.7** hereafter. It is provided purely for illustrative purposes.

The hypothetical global calculation of the JBLI for the twelve months June 2012 to June 2013 is set out in the table below. With the standard rounding to 1 decimal place, this indicates that the cost of living measure has increased by +1.6% (101.6)¹¹.

⁹ Formerly known as Survey of Household Expenditure (SHE)

¹⁰ The preceding surveys were conducted in 2009/10, 2005, 2000 and 1995.

¹¹ NB. This is a purely hypothetical value as the 'overall' methodology is not consistent with the detailed calculation basis which is approved for use. Moreover, in accordance with Regulation 1023/2013 there is no remuneration adjustment for 2013 as there is a pay freeze in force.

Table

**Change in the HICP for Belgium
June 2012 - June 2013**

Groups of consumption	Index
All-items index	101.5

Source: Eurostat

**Change in the CPI for Luxembourg
June 2012 - June 2013**

Groups of consumption	Index
Overall index	102.1

Source: STATEC

**Number of permanent officials and other servants in active service
at June 2013**

Duty station	No.	%
Brussels	34,932	78.3
Luxembourg	9,676	21.7
Total	44,608	100.0

Source: PMO database

**Change in the Joint Index
June 2012 - June 2013**

Groups of consumption	Index
Global index	101.63

2.7 Official detailed calculation

The details of the calculation of the joint index for the twelve months June 2012 to June 2013 are set out in the table below. With the standard rounding to 1 decimal place, this indicates that the cost of living measure to be used for the adaptation of remuneration of EU officials has increased by +1.6% (101.6)¹².

Group	Description	BE HICP	LUX CPI	Official	JBLI
		2013m6/ 2012m6	2013m6/ 2012m6	Weights 2012m6	2013m6/ 2012m6
1	FOOD AND NON-ALCOHOLIC BEVERAGES	105.28	104.14	128.15	104.65
2	ALCOHOLIC BEVERAGES AND TOBACCO	104.14	104.24	20.30	104.90
3	CLOTHING AND FOOTWEAR	101.72	101.03	54.29	101.64
4	HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS	98.87	100.92	297.60	100.57
5	FURNISHINGS, HOUSEHOLD EQUIPMENT AND MAINTENANCE OF HOUSE	101.51	101.80	74.73	101.99
6	HEALTH	101.30	101.03	19.22	101.24
7	TRANSPORT	100.13	101.06	127.21	101.44
8	COMMUNICATIONS	97.60	99.92	21.49	98.05
9	RECREATION AND CULTURE	100.23	102.19	91.74	100.01
10	EDUCATION	100.48	101.22	14.67	100.64
11	HOTELS, CAFES AND RESTAURANTS	101.54	103.15	100.59	101.80
12	MISCELLANEOUS GOODS AND SERVICES	102.20	103.56	49.99	102.52
	Total without rent	101.54	..	762.93	101.68
	Rent	101.27	101.26	237.05	101.27
	Total	101.52	102.06	999.98	101.58

¹² NB. This is a hypothetical value: in accordance with Regulation 1023/2013 there is no remuneration adjustment for 2013 as there is a pay freeze in force.

2.8 Statistical formulae

The first step is the calculation of the basic heading indices, which are obtained as arithmetic weighted average of the national indices in the following formula:

$${}_{t0}JBLI_{t1}^i = \frac{\left(({}_{t0}HICP_{t1}^i \times w_B) + ({}_{t0}CPI_{t1}^i \times w_L) \right)}{(w_B + w_L)}$$

where:

<i>i</i>	=	<i>Basic heading 1 to 80</i>
w_B	=	<i>staff numbers in Brussels at time t_0</i>
w_L	=	<i>staff numbers in Luxembourg at time t_0</i>
<i>HICP</i>	=	<i>Belgium HICP</i>
<i>CPI</i>	=	<i>Luxembourg CPI</i>

The aggregate index is obtained as an arithmetic weighted average of the basic heading indices in the following formula:

$${}_{t0}JBLI_{t1}^i = \frac{\sum_{i=1}^{80} {}_{t0}JBLI_{t1}^i \times W_B^i}{\sum_{i=1}^{80} W_B^i}$$

where:

$JBLI^i$	=	<i>Basic heading index</i>
W_B^i	=	<i>Weight of basic heading in the Brussels consumption structure</i>

A diagram illustrating this calculation is included as **appendix 1**.

3 Intermediate calculation (Intra-EU)

In accordance with Article 6 of Annex XI for the Staff Regulations, an intermediate adjustment is made only if there is a substantial change, above the specified sensitivity threshold, in the cost of living in headquarters duty stations (which will then apply for all staff) or one of the other duty stations (which then applies in isolation for staff in that duty station).

The sensitivity threshold is currently 3.0% (the percentage corresponding to 6% for a 12-month period)¹³.

The elements of the intermediate adjustment are as follows:

- Half of the forecast, in March (t), of changes in the purchasing power of remuneration in the central administration of Member States, July (t-1) to July (t);
- Change in the cost of living for Brussels and Luxembourg - measured by the JBLI for the 6-month reference period, June (t-1) - December (t-1).
- Change in the cost of living for other duty stations - measured by the *implicit indices* (the implicit indices are the JBLI for the 6-month reference period multiplied by the change in the economic parity between the snapshots at the start and end of the reference period, June (t-1) and December (t-1)).

The adjustment is applied to all places when the 6-month sensitivity threshold is reached in Brussels and Luxembourg (i.e. change in the JBLI \geq 3.0%); otherwise it is applied only in places where the implicit indices exceed the threshold.

For the purposes of the intermediate calculation, the JBLI has again to be calculated by aggregating the indices at detailed level to produce an overall value. The same methodological approach is followed as the one described for the annual calculation, except that the duration of the reference period for the temporal variation is for six months rather than twelve months.

¹³ This interpretation of the sensitivity threshold for the intermediate adjustment was decided in the meeting of the Article 64 Working Group held on 27th April 2005 and reaffirmed in the meeting of the Working Group on Articles 64 and 65 held on 24th/25th March 2014.

4 Intermediate calculation (Extra-EU)

In accordance with Article 13 of Annex X for the Staff Regulations, an intermediate adjustment is made only if there is a substantial change, above the specified sensitivity threshold, in the cost of living in duty stations (measured by the change in the economic parity in the current month by comparison to the economic parity in force). The sensitivity threshold is currently 5.0%.

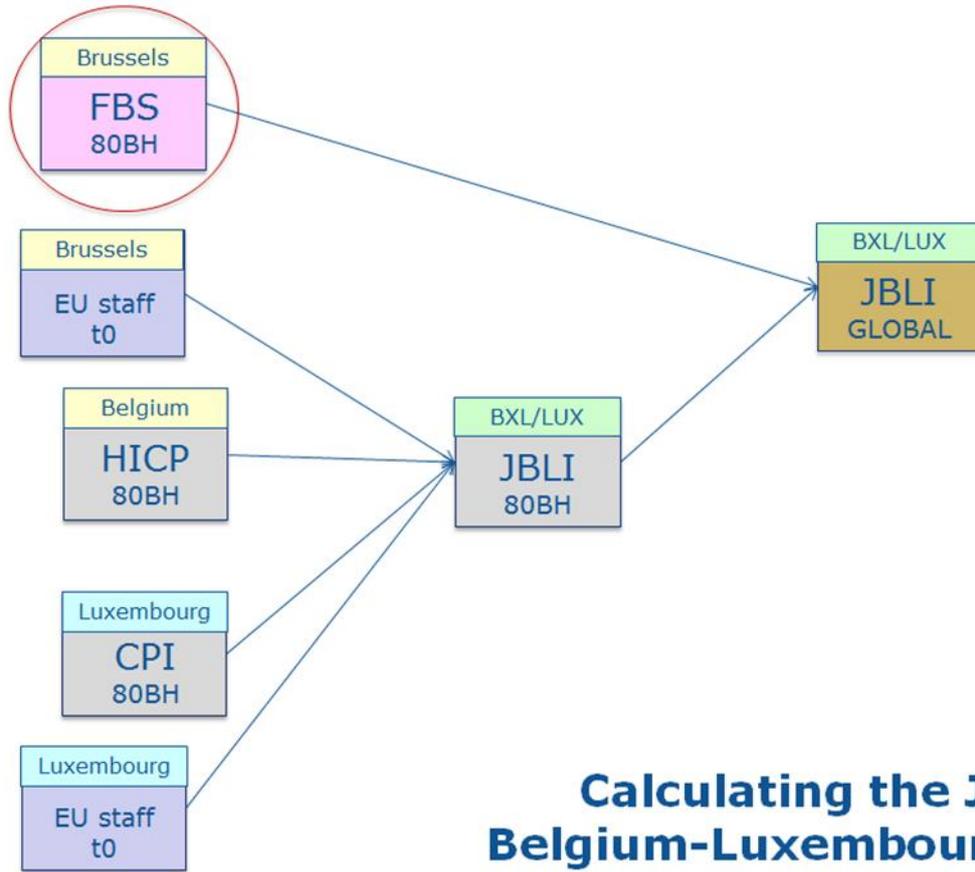
The monthly series of economic parities is established by updating the purchasing power parity between the duty station and Brussels established by a large-scale survey of prices, for the subsequent relative consumer price inflation (i.e. multiplying by the local consumer price index and dividing by the JBLI).

For further details, please see the separate methodology manual for the calculation of Extra-EU correction coefficients¹⁴.

¹⁴ (Op. cit. doc. A6465/14/60).

Appendices

Appendix 1: JBLI calculation diagram



Appendix 2: List of 80 basic headings and 12 main groups

<< see separate file >>