



EUROPEAN COMMISSION  
EUROSTAT

Directorate C: National Accounts, Prices and Key Indicators  
Unit C-5: Price statistics. Purchasing Power Parities. Housing statistics

## HARMONISED INDICES OF CONSUMER PRICES AT CONSTANT TAX RATES

### REFERENCE METHODOLOGY

*Version 1.0*

*April 2011*

Harmonised indices of consumer prices at constant tax rates (HICP-CT) are HICPs where the rates of taxes on products are kept constant in the observation period compared to the reference period, i.e. through time. Hence, in the event of a tax rate change, the difference between the current HICP-CT and HICP would indicate the effect of the tax rate change on price changes assuming tax changes are passed on instantaneously and fully.

This document describes the methodology and minimum requirements to be applied for the compilation of harmonised indices of consumer prices at constant tax rates (HICP-CT) as referred to in the Commission Regulation (EC) No 119/2013 <sup>(1)</sup>.

The reference methodology is based on the common standards that were developed by the European Statistical System for the production of indicators with a view to improving the understanding and the analyses of the impact on inflation of changes in the rates of taxes on products. The resulting inflation measures at constant tax rates are compiled respecting these standards as well as all the requirements set for the harmonised indices of consumer prices (HICPs) in general.

#### ***1. Scope***

The taxes in scope, hereinafter referred to as 'taxes', are those taxes on products relating to the final monetary consumption expenditure (Annex Ib of Commission Regulation (EC) No 1687/98 <sup>(2)</sup> of 20 July 1998 amending Regulation (EC) No 1749/96 of 9 September 1996) and taxes directly linked to the level of the final consumption (see Table 1). Subsidies on products shall not be taken into account.

For the calculation of the HICP-CT:

- (a) each tax category which on its own covers 2% or more of the total tax revenue for all taxes shall be taken into account
- (b) taxes accounting for a minimum of 90% of total revenue of taxes shall be kept constant.

---

<sup>(1)</sup> [OJ L 41, 12.1.2013, p. 1.](#)

<sup>(2)</sup> [OJ L 214, 31.7.1998, p. 12.](#)

- (c) The provisions of Commission Regulation 119/2013 may not apply to local/regional taxes to the extent that the local/regional authorities have the right to define the tax themselves, including setting the revenue level. If the local/regional authority's power over the setting of tax rates is limited, and it is collecting tax revenues based on centrally defined legislation and rules, then the tax should be included within the HICP-CT coverage. In any case, the thresholds set in (a) and (b) shall apply also for these taxes.

**Table 1: ESA95 <sup>(3)</sup> classification 'taxes on products' and coverage of the HICP-CT**

<b>ESA95 classification</b>	<b>ESA95 paragraph reference</b>	<b>Description</b>	<b>HICP code</b>
D211	4.17.	Value added type taxes (VAT)	D.211
D.2122	4.18.b.3	Excise duties and special taxes on certain imported products of domestic origin are paid by the producer branch itself	D.2122C
D.2122	4.18.b.5	Taxes on specific services provided by non-resident enterprises to resident units within the economic territory	D.2122E
D.214	4.20.a	Excise duties and consumption taxes (other than those included in taxes and duties on imports)	D.214A
D.214	4.20.d	Car registration taxes	D.214D
D.214	4.20.e	Taxes on entertainment	D.214E
D.214	4.20.g	Taxes on insurance premiums	D.214G
D.214	4.20.h	Other taxes on specific services: hotels or lodging, housing services, restaurants, transportation, communication, advertising	D.214H
-	-	Other taxes on products n.e.c.	D.214L

## **2. Definitions**

The following definitions apply:

1. 'Tax rate' refers to the tax parameter; a tax rate may be a certain percentage of the price or an absolute tax amount levied on a physical unit.
2. The 'tax reference period' is the period which is used to determine the tax rate to be kept constant for the compilation of the HICP-CT. Each year the tax reference period shall be set to the December of the previous year.

<sup>(3)</sup> Council Regulation 2223/96, OJ L 310, 30.11.1996, p. 1.

### 3. Index formula

A Laspeyres-type constant tax rate price index  ${}_L CTP_{t_0, t_n}$  shall be defined as follows:

$${}_L CTP_{t_0, t_n} = \sum_{i=1}^g \frac{p_{i, t_n}(\tau_{i, t_0})}{p_{i, t_0}(\tau_{i, t_0})} \cdot w_i,$$

Where  $p_{i, t}(\tau_{i, t_0})$  denotes the constant tax rate price of item  $i$  ( $i=1, 2, \dots, g$ ) in period  $t$  ( $t=t_0, t_1, t_2, \dots, t_n$ ). The vector  $\tau_{i, t_0}$  comprises product related taxes to be considered within the scope of a constant tax rate price index. For each item  $i$  the vector  $\tau_{i, t}$  generally comprises three tax rates:  $\tau_{i, t} = (\alpha_{i, t}, \beta_{i, t}, \gamma_{i, t})$ .

$\alpha_{i, t}$ ,  $\beta_{i, t}$ ,  $\gamma_{i, t}$  are defined as follows:

$\alpha_{i, t}$ : tax levied at a constant rate (= fixed amount) per physical unit of item  $i$  in period  $t$  (specific tax),  $\alpha_{i, t} \geq 0$ ;

$\beta_{i, t}$ : tax levied at a constant rate per monetary unit of the price of item  $i$  in period  $t$  (ad valorem tax),  $\beta_{i, t} \geq 0$ ;

$\gamma_{i, t}$ : value added tax levied at a constant rate on the price for item  $i$  in period  $t$ ,  $\gamma_{i, t} \geq 0$ .

### 4. Sequence of taxes

The sequence of taxes (i.e. the price on which an ad-valorem tax is levied) may differ by type of product:

- The specific tax  $\alpha_{i, t}$  can be levied before or after the ad valorem tax  $\beta_{i, t}$ .
- The ad valorem tax  $\beta_{i, t}$  can be levied either directly on the pre-tax price or on the pre-tax price plus the specific tax  $\alpha_{i, t}$ , or it is linked to the final purchaser price.
- The VAT  $\gamma_{i, t}$  is levied on the pre-tax price plus all other taxes. It is the last tax to be applied.

### 5. Tax rate changes

Changes in tax rates which enter into force on the 1<sup>st</sup> day of the month shall be reflected in the compilation of the indices for the same month.

Changes in tax rates which enter into force at a later date during the month shall be reflected in the compilation of the indices for the following month.