

## **Product description: Unit value and volume indices for foreign trade**

Unit value indices and volume indices are calculated in order to follow the changes in prices and quantities of foreign trade. Indices describing the development of prices and quantities are important instruments for decision makers, planners, and researchers working in the private and public sectors, as well as for their operations of the EU and many international organisations.

### **Concepts, definitions, and classifications used**

In foreign trade index calculation, the Laspeyres formula is used to calculate the unit value index, and the Paasche formula in the calculation of volume index. Indices are calculated as chain indices, and the year previous to the year calculated is always used as comparison.

The following formula is used for the calculation of unit value indices:

$P(L) = \frac{\sum w(0) (p(n)/p(0))}{\sum w(0)}$  in which  $p$ = unit value of an index heading  $w$ = weight coefficient of the index heading.

Volume indices are calculated using the unit value indices as deflators. Monthly volume indices are calculated so that the monthly export/import value of a commodity group is deflated with the corresponding unit value index, and the value obtained is compared with the average monthly value of the previous year. Cumulative volume indices are calculated correspondingly using the cumulative export/import values with the cumulative unit value indices as deflators.

The points of the terms of trade are calculated by using the formula:  $(\text{unit value index, exports} / \text{unit value index, imports}) \times 100$

Both monthly and cumulative unit value and volume indices are chained by multiplying the unchained indices with the corresponding yearly chained index of the previous year.

Sub-headings of the Combined Nomenclature (CN) are used as index headings. When monthly and cumulative unit value indices are calculated, the statistical value of the index headings per the quantity unit given by the CN-nomenclature is used as price quotation. The price quotations of the entire previous year are used as price quotations for the comparison year for both monthly and cumulative unit value indices. The weight coefficients for the index headings can be derived from the value shares of the year used for comparison. The weight coefficients are raised for each commodity group so that the sum total of the weight coefficients belonging to a particular commodity group corresponds with the value share of that commodity group during the year of comparison.

The foreign trade unit value and volume indices are calculated and published according to the Classification of Products by Activities (CPA) and according to the main use of the goods (Main Industrial Grouping or MIG).

### **Reliability and timing of the statistics**

The data for both the monthly and the cumulative indices are checked after the monthly statistics for foreign trade have been completed. Nevertheless, the information used is preliminary and can change in the final check of the statistical material. The adjustments which have been carried out on statistical material previous to the month calculated have been observed in the cumulative monthly index.

The foreign trade unit value and volume indices are published within five weeks after the publication of the monthly statistics.