

INVENTORIES OF SOURCES AND METHODS FOR PRICE AND VOLUME MEASURES IN NATIONAL ACCOUNTS

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Chapter 4 Methods for other parts of the system

4.1 Value added

In order to calculate GDP at constant prices from the production side, it must be possible to calculate value added at constant prices for the goods and services produced in the economy. Value added is calculated indirectly and corresponds to the difference between production value and intermediate consumption. It cannot, therefore, be split into price and volume components. Production value is calculated at the basic price and intermediate consumption at the purchasers' price. Totalling the value added for all branches plus net figures for taxes and subsidies on products yields the GDP. Thus, value added appears as a balance item in the system of national accounts. Production and intermediate consumption are each deflated. Thus double deflation is used for calculating value added at constant prices. This is known as an "A-method" calculation.

4.2 Taxes and subsidies on products

When calculating GDP at constant prices from the production side, production is evaluated at basic prices. This means that taxes and subsidies on products must be added or subtracted to obtain GDP at market prices. taxes and subsidies on products here function as components in the production of market products that are accounted for separately and should therefore also be calculated at constant prices.

Taxes on products are taxes payable on each unit of a good or service produced or involved in a transaction. It may be levied at a fixed rate per unit or may be a percentage of the unit price or value of the goods or services. Taxes are levied on products such as spirits, tobacco, energy and games. They are calculated by calculating a constant price for each group as follows:

$$fp_t = lp_t / (s_t / s_{t-1})$$

where

fp = constant price, year t

lp = current price, year t

s_t and s_{t-1} are the tax rates expressed in Swedish crowns/unit in years t and t-1, respectively.

A tax increase results in $fp < lp$, while if the tax rate remains unchanged $fp=lp$.

Taxes on products are broken down into:

- a) value-added taxes
- b) taxes and duties on imports excluding VAT
- c) taxes on products excluding VAT and import taxes

Taxes and duties on imports excluding VAT comprise compulsory payments, excluding VAT, levied by general government or the institutions of the European Union on imported goods before they can be placed on the market within the economic territory, and on services provided by Swedish branches of foreign units.

Subsidies on products comprise general government contributions to industry. They are fixed or variable contributions per quantity or value unit for the manufacture, sale or consumption of a given product.

Example of methods of calculation at constant prices:

Subsidies for public transport.

These are updated for volume at the same rate as the change in consumption by households of public transport, since it is to subsidise precisely this transport that they are applied.

Agricultural subsidies

These are calculated by the Board of Agriculture [*Jordbruksverket*] in accordance with Eurostat's instructions, which means that the volume changes in parallel with the value at producer prices. Changes in price can be imputed. This is an "A-method".

The methods used to deflate taxes and subsidies on products on the basis of data on the quantities produced are "A-methods".

4.2.1 Value-added tax

A value-added tax is a tax on goods and services that is collected in successive stages by businesses and is ultimately charged in full to the final purchaser. Producers have only to pay the difference between the VAT on their sales and the VAT on their own purchases for intermediate consumption of goods and services or for gross capital formation. For the economy as a whole, VAT is equal to the difference between all invoiced VAT and all deductible incoming VAT. In the product accounts, VAT is calculated in supply and use tables for around 400 product groups for the various uses. VAT at constant prices is calculated for a given year at the percentage applicable to the product group in question in the previous year.

VAT is recorded net so that

- a) production and imports of goods and services will be valued excluding invoiced outgoing VAT,

b) purchases of goods and services will be recorded including non-deductible VAT. VAT is recorded as payable by the purchasers rather than the sellers, and then only the purchasers that cannot deduct it. Most VAT is therefore recorded in the system as paid on final uses, and particularly household consumption. Some VAT may, however, be paid by businesses - particularly those that are not themselves subject to VAT as, for example, in the education and health areas.