

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

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|--|-----------|
| CHAPTER 3 METHODOLOGIES BY PRODUCT ACCORDING TO CPA | 2 |
| 3.1 Introduction | 2 |
| 3.2 Output | 3 |
| 3.2.1 Section A, Products of agriculture, hunting and forestry | 3 |
| 3.2.2 Section B, Fish and other fishing products; services incidental to fishing | 5 |
| 3.2.3 Section C, Products from mining and quarrying | 5 |
| 3.2.4 Section D, Manufactured products | 5 |
| 3.2.5 Section E, Electrical energy, gas, steam and hot water | 10 |
| 3.2.6 Section F, Construction work | 10 |
| 3.2.7 Section G, Wholesale and retail trade services; repair services of motor vehicles, motorcycles and personal and household goods | 11 |
| 3.2.8 Section H, Hotel and restaurant services | 11 |
| 3.2.9 Section I, Transport, storage and communication services | 12 |
| 3.2.10 Section J, Financial intermediation | 13 |
| 3.2.11 Section K, Real estate, Renting and Business activities | 13 |
| 3.2.12 Section L, Public Administration and Defence, Compulsory Social Security | 14 |
| 3.2.13 Section M, Education | 15 |
| 3.2.14 Section N, Health and Social Work | 15 |
| 3.2.15 Section O, Other community, social and personal service activities | 16 |
| 3.2.16 Section P, Private households with employed persons | 16 |
| 3.3 Intermediate consumption | 16 |
| 3.4 Household final expenditure | 17 |
| 3.4.1 Deflators for consumption by Swedes abroad and by foreign visitors in Sweden | 17 |
| 3.5 Government final consumption expenditure | 18 |
| 3.5.1 Constant-price calculation by purpose and year | 18 |
| 3.6 NPISH final consumption expenditure | 20 |
| 3.7 Gross fixed capital formation | 21 |
| 3.7.1 Gross fixed capital formation at constant prices | 21 |
| 3.8 Changes in stocks | 23 |
| 3.9 Acquisitions less disposals of valuables | 24 |
| 3.9.1 Investment in entertainment, literary and artistic originals and valuables | 24 |
| 3.9.2 Acquisitions less disposals of valuables | 24 |
| 3.10 Exports and imports of goods and services | 24 |

Chapter 3 Methodologies by product according to CPA¹

3.1 Introduction

In Sweden's national accounts, various methods are used for calculations at constant prices. There are relevant price indices for many areas, which are used for deflating the value in current prices. For some areas, volume indicators are used for calculations at constant prices. People often complain of the lack of a price index for the output of services. For many services activities, there are no price indices available and alternative solutions have to be sought for the national accounts. In these cases, often wage indices are used for deflating without adjustment for any assumed change in productivity. Using a wage index implies an assumption that prices for services develop in line with wages in the branch. Hence it is (implicitly) assumed that there is no change in productivity or operating surplus. It is thought that any such adjustment would be too arbitrary: it is difficult to argue whether the adjustment should be one or two percent up or down. Examples of such branches include business and legal consultancy, IT consultancy, data-processing services, and security and financial services.

Work is, however, under way on developing relevant price indices for the majority of the service branches. These should be in production by 2006. In the vast majority of cases, if the output is used as intermediate consumption in other branches this does not affect the GDP or growth in GDP recorded. In the case of producer services for final use however, such as gross capital formation or export, the deflation error directly affects the change in GDP. This is the case with software (at least if it is purchased) and certain architects' and building-consultancy services included under fixed capital formation, as well as a large proportion of export services.

The methods used for the various areas are described below.

For each product group (PG), the value of output in current prices for 2000, the index used, and the type (quality) of the method used are shown. The methods are classified as "A", "B" or "C" in accordance with Eurostat's guidelines for deflators and volume indicators².

A = Best method

B = Acceptable method

C = Unacceptable method

A-method: A price index that relates to the product(s) for which constant-price calculations are to be made, is valued at basic prices and takes account of changes in quality - e.g. the service price index for premises rentals, known as the "*LHU* index" [*Lokal- and hyreshusundersökningen* - rented accommodation inquiry].

¹ Statistical Classification of Products by Activity, Eurostat

² Handbook on Price and Volume Measures in National Accounts

B-method: A producer price index that does not exactly relate to the items for which constant-price calculations are to be made or take account of changes in quality. Alternatively, a volume index that takes account of changes in quality or a CPI that relates to most of the current product or product group and otherwise meets the requirements of an A-method. For example, the output of hairdressing can be deflated by means of the CPI for hairdressing, adjusted for any changes in taxes, subsidies or margins.

C-method: Input methods or price indices that are not relevant to the products in question - e.g. wage index, total CPI or a PPI relating to input in the product group to be deflated. An example of a C-method is the use of the factor-price index for goods-transport services. This is a cost-price index and does not measure price changes in output.

Wherever CPIs are used for deflating output, they are adjusted for changes in taxes and/or subsidies so that the price index reflects changes in the basic price.

3.2 Output

3.2.1 Section A, Products of agriculture, hunting and forestry

Agricultural output is calculated in accordance with the guidelines set out in the EAA³ handbook using output price indices (O) and in some cases means-of-production price indices (MP). These are A-methods for deflating. Closely related indices are used for a number of product groups. This is a B-method. The groups in question are 0113E wild berries, 0121202 calves, 01252 animals reared for furs, and 01254 pets.

For forestry output, product groups 014A-0202, the forestry organisations collect and calculate data on quantities and values in current prices. The data are calculated for detailed product groups and in some cases also for different regions. The methods used are classified as A-methods.

The product groups within CPA 01-02 included in the system of national accounts are shown below. In many cases these are amalgamations of product groups that have been calculated at a lower level, which means that it is not so easy to say which deflation method was used for the respective product group at NA level.

³ Economic Accounts for Agriculture, Eurostat

| Product Group | Description | Current Price 2000 |
|----------------------|---|---------------------------|
| 01111A | Wheat | 2623 |
| 01111B | Rye | 197 |
| 01111C | Barley | 1461 |
| 01111D | Oats | 1246 |
| 01111E | Mixed grain | 187 |
| 01111F | Other cereals | 3 |
| 01111G | Energy crops | 86 |
| 01111H | Planting seed | 1088 |
| 0111300 | Potatoes | 967 |
| 011130A | Potatoes for home consumption | 161 |
| 0111401 | Sugar beet and sugar cane | 1064 |
| 01119A | Legumes for feed | 14 |
| 01119B | Oil plants | 381 |
| 01119D | Planting seed (excl. cereals and potatoes) | 37 |
| 01119E | Other agricultural plants | 0 |
| 0111A | Feed crops | 1261 |
| 0112A | Vegetables | 1289 |
| 0112B | Flowers/plants | 1590 |
| 0113A | Fruit | 311 |
| 0113E | Wild berries | 271 |
| 0121201 | Cattle | 4128 |
| 0121202 | Calves | 66 |
| 0122801 | Horses including breeding horses | 692 |
| 0122A | Sheep and goats | 152 |
| 0123 | Pigs | 3335 |
| 0124100 | Eggs | 772 |
| 012410A | Eggs for home consumption | 29 |
| 0124A | Poultry | 867 |
| 0125100 | Reindeer | 179 |
| 01252 | Animals reared for furs | 361 |
| 01254 | Pets | 351 |
| 01259 | Game | 532 |
| 012A | Milk | 9961 |
| 012B | Meat for home consumption | 56 |
| 012C | Invest. livestock for breeding and dairy cattle | -325 |
| 012D | Other animal products | 92 |
| 012E | Milk for home consumption | 31 |
| 014A | Services to agriculture | 1237 |
| 0201101 | Variations in quantity of timber cut | 6340 |
| 0201105 | Firewood | 774 |
| 0201106 | Other unprocessed wood | 36 |
| 02011A | Pulpwood | 5454 |
| 02011B | Saw timber | 13288 |
| 02012A | Forest drainage | 1491 |
| 0201A | Forest management and logging | 36 |
| 0201B | Forest regen. mat. and other forestry prod. | 216 |
| 0202 | Services to forestry | 2 |

3.2.2 Section B, Fish and other fishing products; services incidental to fishing

| PG | Description | CrtP | Index | Method |
|------|------------------------|------|------------------|--------|
| 050A | Fish, crustaceans etc. | 1069 | Unit value index | A |

Data on values in current prices and quantities can be found for various fish products broken down by salt- and freshwater fish, and aquaculture. The price index is calculated at a detailed level on the basis of value and quantity data. The method used is an A-method.

3.2.3 Section C, Products from mining and quarrying

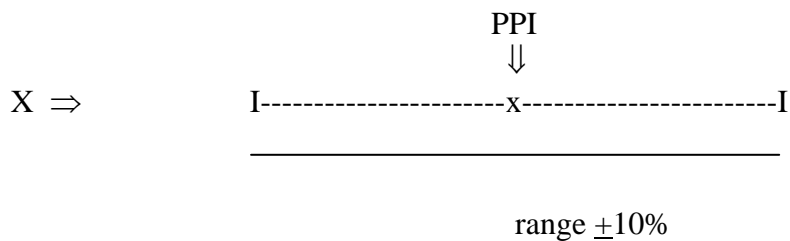
The price index for products from the extraction of energy-producing materials, ores and minerals is obtained from the compilation of the producer price index. The method used is an A-method.

| PG | Description | CrtP | Index | Method |
|---------|--|------|-------|--------|
| 1030 | Peat | 1141 | PPI | A |
| 1310000 | Iron ore | 4776 | PPI | A |
| 13200 | Non-ferrous metal ores except uranium and thorium ores | 2564 | PPI | A |
| 141 | Stone | 598 | PPI | A |
| 142 | Sand, gravel, rock and clay | 4701 | PPI | A |

3.2.4 Section D, Manufactured products

Constant-price calculations for manufactured products

In most cases constant-price calculations for manufactured products are based on PPIs. The unit value index is used for about 15%–20% of the total. The 200 or so largest and smallest values are dealt with separately. If the products are not comparable, PPIs are used instead. Price indices calculated from the unit value index are checked separately. An observation in the study entitled "*Industrins varuproduktion*" [Production of Goods by Industry], calculated as a unit value index, is checked as follows:



If the observation (X) lies outside the range of $\pm 10\%$ around the PPI, it is moved to the extreme of the range - i.e. the PPI takes over from the unit value index. Special comparisons with foreign-trade statistics are also made for certain branches/businesses.

Other industrial output is dealt with as follows:

- *Repair and assembly*: for these industrial services the wage index is used as the deflator. It is reduced by 1% in order to increase productivity.
- *Hire processing, i.e. remuneration received for processing and compensation for own materials if used*: PPIs are used for the corresponding SNI⁴ items.
- *Other processing, i.e. bleaching, dyeing, grinding, gilding, etching, lacquering, printing, etc.*: The wage index is used for deflating, except in SNI 22222 (printing of books and other printed articles), for which PPIs are used.

Large equipment goods

This group includes large articles that are often produced only as single items or as one series. It is also common that new materials and production techniques are used when similar articles are subsequently produced. It is very difficult, therefore, to calculate relevant price indices for these goods, examples of which include ships and boats, aircraft and large machinery - for the paper-pulp industry, for example. For these goods, PPIs for higher-level aggregates are used (see Section 3.7). The method used is a C-method.

Computers

The PPI for the relevant CN⁵ number is used. Larger-scale production is found only in the case of computer components, for which PPIs are calculated in the conventional manner. This is a B-method.

Deflation of the output of manufacturing is done mainly by means A-methods using, for example, PPIs and the unit value index at detailed level. The product groups covered by the system national accounts are shown below. In many cases they are amalgamations of CN numbers and product groups for which calculations have been made at a more detailed level, and it is therefore not possible to indicate a single deflation method for each group.

| PG | Description | CurrentPrice |
|-----------|--|---------------------|
| 15111 | Beef and veal; whole, half or quarter carcasses | 5241 |
| 15112 | Beef and veal; small cuts | 7878 |
| 15120 | Poultry meat, fresh and preserved | 1751 |
| 15130 | Meat products | 11419 |
| 15200 | Fish and fishery products, processed and preserved | 3122 |
| 15310 | Potatoes, processed and preserved | 1469 |
| 1532000 | Fruit and berry juices and vegetable juices | 1248 |
| 15330 | Miscellaneous fruit, berries and vegetables, processed/preserved | 2687 |

⁴ Standard för svensk näringsgrensindelning, equivalent to NACE Rev.1 on 4-digit level

⁵ CN= Combined Nomenclature

| | | |
|---------|--|-------|
| 15410 | Raw vegetable and animal oils and fats | 326 |
| 15420 | Refined vegetable and animal oils and fats | 784 |
| 1543000 | Margarines and similar preparations | 2433 |
| 1551100 | Cheese and curds | 4530 |
| 1551201 | Milk and cream <6% fat | 4973 |
| 1551202 | Milk and cream >6% fat | 2243 |
| 1551206 | Yoghurt | 2821 |
| 15512A | Other dairy products | 3365 |
| 1552000 | Ice-cream | 1794 |
| 15611 | Flour | 1676 |
| 15612 | Breakfast cereals, mixes and other grain-mill products | 1656 |
| 15620 | Starches and starch products | 1632 |
| 15710 | Prepared feeds, meal and pellets of alfalfa | 4033 |
| 1572000 | Petfoods | 348 |
| 15810 | Bread and fresh bakery products | 9480 |
| 1582 | Crispbread, biscuits and preserved bakery products | 2257 |
| 15830 | Sugar | 1981 |
| 1584 | Cocoa, chocolate and confectionery | 5148 |
| 15850 | Pasta products | 391 |
| 15860A | Coffee | 3003 |
| 15860B | Tea | 5 |
| 15870 | Mustard, ketchup, spices and other condiments | 2392 |
| 158A | Other foods, including homogenised preparations | 2829 |
| 1591000 | Distilled alcoholic beverages | 3972 |
| 15920 | Ethyl alcohol (crude spirit) | 176 |
| 15960 | Beer | 3437 |
| 1597000 | Malt | 335 |
| 15980 | Mineral water and soft drinks | 4809 |
| 159A | Wine, cider and other non-distilled fermented beverages | 922 |
| 16000 | Tobacco products | 2413 |
| 171 | Yarn | 100 |
| 172 | Woven fabrics of textile and glass fibre | 1170 |
| 17300 | Bleaching, dyeing, textile printing plants and other textile processing plants | 519 |
| 174 | Sewn textile products except wearing apparel | 1842 |
| 175 | Other textiles | 4333 |
| 17600 | Elastic webbing | 687 |
| 177 | Knitted goods | 329 |
| 1810000 | Leather garments | 107 |
| 182 | Other clothing and accessories | 2000 |
| 18300 | Furs; fur products | 116 |
| 19100 | Leather | 642 |
| 19200 | Luggage, handbags, saddle goods | 407 |
| 19300 | Footwear | 414 |
| 20101 | Wood, sawn | 28034 |
| 20102 | Wood, planed | 6093 |
| 20103 | Unprocessed wood; impregnated or otherwise treated | 698 |
| 20201 | Veneer, plywood and laminated board | 897 |
| 2020200 | Particle board | 1970 |
| 20203 | Fibre board | 651 |
| 2030100 | Prefabricated timber houses | 6005 |
| 20302 | Building joinery and interior fittings | 11801 |

| | | |
|---------|---|-------|
| 20400 | Wooden containers | 2495 |
| 20510 | Other wood products | 1941 |
| 20520 | Articles of cork, straw, plaiting materials and the like | 48 |
| 2111100 | Mechanical or semi-chemical wood pulp | 1631 |
| 21112 | Sulphate pulp | 21175 |
| 2111300 | Sulphite pulp | 1105 |
| 2112100 | Newsprint | 11137 |
| 21122 | Other printing paper | 10206 |
| 21123 | Kraft paper and kraft liner board | 13994 |
| 21129 | Other paper and board | 28231 |
| 2121100 | Corrugated board and corrugated board packaging | 4628 |
| 21219 | Paper and board packaging except corrugated board | 2430 |
| 21220 | Household and sanitary goods of paper | 5599 |
| 21230 | Writing paper, envelopes and the like | 2553 |
| 21240 | Wallpaper | 317 |
| 21250 | Miscellaneous paper or board products | 2751 |
| 221 | Products from publishing activity | 38933 |
| 222 | Printing products | 27675 |
| 223 | Reproduction of recorded media | 274 |
| 2310001 | Coke | 66 |
| 2310002 | Mineral tars | 39 |
| 2320007 | Heavy fuel oil | 8407 |
| 2320008 | Luricants | 3016 |
| 2320009 | Propane and butane | 671 |
| 2320010 | Ethylene, propylene, butylene etc. | 169 |
| 23200A | Motor gasoline | 13213 |
| 23200B | Light oils, kerosene (excluding aviation), other medium oils | 1181 |
| 23200C | Aviation and jet gasoline, aviation kerosene | 683 |
| 23200D | Diesel oil, motor kerosene | 14230 |
| 23200E | Domestic fuel oil | 5271 |
| 23200F | Petroleum coke, petroleum bitumen etc. | 1843 |
| 23300 | Nuclear fuel | 786 |
| 24110 | Industrial gases | 1414 |
| 24120 | Dyes and pigments | 266 |
| 24130 | Other inorganic basic chemicals | 5385 |
| 2414A | Tall oil, charcoal, liquors from the manufacture of wood pulp | 599 |
| 2414B | Other organic basic chemicals | 9679 |
| 24150 | Fertilisers and nitrogen products | 973 |
| 24160 | Basic plastics | 10146 |
| 2417000 | Synthetic basic rubber | 399 |
| 24200 | Pesticides and other agricultural chemicals | 126 |
| 24300 | Paints, varnishes, printing inks etc. | 7013 |
| 24410 | Basic pharmaceuticals | 2429 |
| 24420 | Medicines | 39506 |
| 24510 | Soaps, detergents and polishing preparations | 2348 |
| 24520 | Perfumes and toilet preparations | 837 |
| 246 | Other chemical products | 6020 |
| 24700 | Man-made fibres | 461 |
| 25130 | Other rubber products | 5775 |
| 251A | New and retreaded tyres and tubes | 2031 |
| 252 | Plastic products | 26454 |

| | | |
|---------|---|-------|
| 26110 | Flat glass | 603 |
| 26120 | Shaped and processed flat glass | 1647 |
| 26131 | Bottles and glass containers | 459 |
| 26132 | Household and ornamental glass | 930 |
| 26140 | Glass fibre | 1254 |
| 26150 | Other glass products including technical glassware | 458 |
| 262 | Ceramic products except non-fire-resistant for construction purposes | 2013 |
| 2630000 | Ceramic floor and wall tiles | 62 |
| 26400 | Bricks, tiles and other construction products, in baked clay | 133 |
| 265 | Cement, lime and plaster | 2307 |
| 266 | Concrete, cement and plaster products | 6588 |
| 2670 | Stone goods | 950 |
| 268 | Other non-metal mineral products | 3657 |
| 27100 | Iron and steel and ferroalloys | 39026 |
| 27100X | Scrap iron | 1207 |
| 272 | Iron and steel tubes | 5369 |
| 273 | Other primary products of iron and steel and ferroalloys | 13787 |
| 274 | Non-ferrous metals | 19013 |
| 274X | Non-ferrous metal scrap | 611 |
| 275 | Iron and non-ferrous metal castings | 932 |
| 281 | Structural metal products | 16252 |
| 28210 | Cisterns, tanks, reservoirs and other containers of metal | 897 |
| 28220 | Central heating radiators and boilers | 974 |
| 28300 | Steam generators except central heating boilers | 538 |
| 28400 | Forging, pressing, stamping and roll forming of metal; not for the purpose of manufacture | 2674 |
| 285 | Coating and plating of metal, contract metal work | 25753 |
| 286 | Cutlery, tools and other hardware products | 14974 |
| 287 | Other metal products | 23700 |
| 291 | Machinery for the production and use of mechanical power, except aircraft/vehicles | 23842 |
| 292 | Other general purpose machinery | 37893 |
| 293 | Agricultural and forestry machinery | 6590 |
| 2940 | Machine-tools | 15839 |
| 29510 | Machinery for metallurgy | 1392 |
| 29520 | Machinery for mining, quarrying and construction | 12566 |
| 29530 | Machinery for food, beverage and tobacco processing | 3474 |
| 29540 | Machinery for textile, apparel and leather production | 1769 |
| 29550 | Machinery for pulp, paper and paperboard production | 5798 |
| 29561 | Plastic and rubber processing machinery | 255 |
| 29569 | Miscellaneous other special machinery | 13458 |
| 29600 | Weapons and ammunition | 5314 |
| 29711 | Refrigerators and freezers, washing machines and other white goods | 3439 |
| 29719 | Other domestic electric appliances | 4450 |
| 29720 | Non-electric domestic appliances | 537 |
| 30010 | Office machinery and parts for such machinery | 2138 |
| 30020 | Computers and other data processing equipment | 3854 |
| 31100 | Electric motors, generators and transformers | 7906 |
| 31200 | Electricity distribution and control apparatus | 11101 |
| 31300 | Insulated wire and cable | 7837 |
| 31400 | Batteries and accumulators | 2146 |
| 3150 | Lighting equipment, electric lamps and lighting tubes | 3719 |

| | | |
|---------|---|--------|
| 316 | Other electrical equipment | 5929 |
| 32100 | Electronic components | 9116 |
| 32200 | Television and radio transmitters, apparatus for line telephony and line telegraphy | 106017 |
| 32300 | Television and radio receivers, sound or video recording apparatus | 24265 |
| 33101 | Medical equipment | 9976 |
| 3310200 | Dentures | 2171 |
| 33200 | Instruments and appliances for measuring, checking, testing | 14001 |
| 3330000 | Instruments for industrial process control | 4673 |
| 33400 | Optical instruments and photographic equipment | 2192 |
| 33500 | Watches and clocks | 161 |
| 34100 | Motor vehicles | 99351 |
| 34200 | Bodies for motor vehicles; trailers, semi-trailers | 11822 |
| 34300 | Parts and accessories for motor vehicles and engines | 50128 |
| 35110 | Ships and boats | 4154 |
| 35120 | Pleasure boats | 2937 |
| 35200 | Railway locomotives and rolling stock | 7290 |
| 35300 | Aircraft and spacecraft | 13043 |
| 35410 | Motorcycles | 261 |
| 35420 | Bicycles | 496 |
| 35430 | Invalid carriages | 1198 |
| 3550000 | Other transport equipment | 232 |
| 361 | Furniture | 25727 |
| 362 | Jewellery, gold and silver articles | 720 |
| 36300 | Musical instruments | 125 |
| 36400 | Sports goods | 1003 |
| 36500 | Games and toys | 556 |
| 366 | Miscellaneous goods | 2149 |
| 3710000 | Recycling of metal waste and scrap | 2134 |
| 3720000 | Recycling of non-metal waste and scrap | 1084 |

3.2.5 Section E, Electrical energy, gas, steam and hot water

| PG | Description | CrtP | Index | Method |
|---------|---|-------|-------------------|--------|
| 40100A | Electricity and distribution of electricity | 42494 | Unit value+CPI | B |
| 40200 | Manuf. gas and distribution of gaseous fuels through mains | 2103 | Unit value ind. | B |
| 4030000 | Steam and hot water supply, incl cold water/ice for cooling | 16878 | Weight. PPI + CPI | B |
| 41000 | Supply of water including sewerage | 10750 | CPI Water | B |

3.2.6 Section F, Construction work

| PG | Description | CrtP | Index | Method |
|----|--------------|--------|--|--------|
| 45 | Construction | 158699 | Weighted index fixed cap. form. and rep. | C |

Construction work is calculated from the uses side as the sum of fixed capital formation and repairs. Deflation is carried out using price indices for fixed capital formation and repairs adjusted for VAT (see Section 3.7).

3.2.7 Section G, Wholesale and retail trade services;

repair services of motor vehicles, motorcycles and personal and household goods

| PG Description | CrtP Index | Method |
|--|------------------------------|--------|
| 5AA Commissions | 6086 IMPI total | C |
| 5AB Merchandising | 24077 IMPI tot/IMPI motorveh | C |
| 5C Margins | 303599 Implicit S/U | B |
| 50A Repair of motor vehicles incl. motorcycles | 23224 CPI mv.rep | B |
| 527 Rep housh/pers art | 4629 CPI rep hh.goods | A |

Calculations of trade margins for the product accounts are carried out in the Supply- and Use-tables. There is a percentage margin for each product group. The margins are totalled in the system. Trade margins generated in branches other than SNI G are subtracted from the total and the remainder is the output value for trade margins within the SNI G.

The percentage for the base year is used for extrapolating the value in constant prices for each product group. This means that the trade margin for each product is extrapolated in line with the purchasers' price. Assuming the same trade margin implies that the quality of the goods or related services has not changed from one year to another.

If checks on the Supply- and Use tables reveal substantial discrepancies between the current and constant prices, this may indicate that something has changed from one year to another. The discrepancy may result from an increase or reduction in the trade margin because of competition or a change in the service offered. If there has been a change in the service offered there will be a change in the margin in constant prices too.

The method described - which is based on the principle that volume changes for trade margins follow the same pattern as volume changes for trade and is applied within the Supply- and Use system - is a B-method.

3.2.8 Section H, Hotel and restaurant services

| PG | Description | CrtP | Index | Method |
|-----|--|-------|-----------------|--------|
| 551 | Hotel serv. | 11747 | SPI hotel serv. | A |
| 552 | Camping and other accomm. services | 1295 | CPI camping | A |
| 555 | Canteen, catering and central kitchen services | 1768 | CPI restaurant | B |
| 55A | Restaurant and bar services | 56446 | CPI restaurant | B |

In the hotel services group, SPIs (Services Price Indices) are used for accommodation services provided by hotels. This is an A-method. CPIs only are used for measuring restaurant services. If the change in price is different for private and corporate customers, this is a B-method. Allowance has been made for undeclared work and this is deflated using the same price indices as for other work.

3.2.9 Section I, Transport, storage and communication services

| PG | Description | CrtP | Index | Method |
|----------|---|-------|----------------------|--------|
| 60100A | Passenger transport by railway | 4672 | CPI railway | B |
| 60100B | Passenger transport by railway: contract | 708 | CPI/own | B |
| 60100C | Goods/ore transport by railway | 4539 | FPI transport | C |
| 6021A | Passenger transport (public transport) | 29827 | CPI pub.trans. | B |
| 6021B | Goods transport (public transport) | 130 | FPI transport | C |
| 60220 | Taxi transport | 14804 | CPI taxi | B |
| 60230 | Passenger transport, bus | 2197 | CPI bus trips | B |
| 60240 | Road transport, goods | 60125 | FPI transport | C |
| 61A | Passenger transport, boat/ship | 1631 | CPI boat trips | B |
| 61B | Goods transport, boat/ship | 24479 | FPI transport | C |
| 61C | Hire of ships and boats | 4270 | Charter rate | B |
| 62A | Passenger transport, air | 19041 | SPI air | A |
| 62B | Goods transport, air | 606 | SPI air | A |
| 62C | Hire of aircraft | 670 | SPI air | A |
| 63110 | Cargo handling | 3589 | FPI transport | C |
| 63120 | Storage and warehousing | 2489 | FPI transport | C |
| 63210A | Parking services | 2679 | CPI parking | B |
| 63210B | Toll road and bridge services | 288 | Unit value | B |
| 63210C | Other supporting land transport activities | 721 | FPI transport | C |
| 63220A | Port services | 1441 | FPI transport | C |
| 63220B | Pilotage and other navigation services | 1241 | revenue/pilotage | B |
| 63220C | Other supporting sea transport activities | 728 | FPI transport | C |
| 63230 | Other supporting air transport activities | 5813 | LFV index | A |
| 63301 | Package tours by air and bus, domestic and foreign | 27414 | CPI package tours | B |
| 6330A | Other travel organising and tourist assistance activities | 4165 | Weight CPI/PPI | B |
| 63400 | Other transport agency services | 20320 | FPI transport | C |
| 641 | Post and courier activities | 20083 | Price ind. large op. | B |
| 64201A | Telecommunications services excluding mobile telephony | 48842 | SPI telecom | A |
| 64201B | Mobile telephony | 15831 | SPI mobil | A |
| 64202 | Broadcasting services, television and radio transmission | 1527 | Price ind. large op. | B |
| 64203 | Cable services, television and radio services | 1920 | CPI cableTV | B |
| 63210PEA | Supporting land transport activities | 24487 | cost calculation | C |
| 6330PEA | Travel agencies | 390 | cost calculation | C |

For 61C, hire of ships and boats, the price index for the charter rate is used, as calculated by the German Statistical Office. The price index for 63210B, which covers the Öresund bridge, is calculated on the basis of data on tolls and traffic volume for various types of vehicles. Public transport (6021A) includes subsidies from local authorities. These are extrapolated for volume on the basis of the volume change for consumption of public transport by households since it is private individuals that mainly benefit from these subsidies. Factor price indices are extensively used for goods transport. This is a C-method. Development work is under way, however - for sea transport, for example. Development work is also under way for ancillary activities in the form of forwarding and goods handling. Postal services are dominated by one large operator and the price index used is an

output price index based on the activities of that operator. This is a B-method. Telecommunications are largely deflated using the service price index [*tjänsteprisindex - TPI*]. LFV index is an index derived from the Swedish Civil Aviation Administration. "OPEA" stands for "public production for own final consumption" [*offentlig produktion för egen användning*].

3.2.10 Section J, Financial intermediation

| PG | Description | CrtP | Index | Method |
|--------|---|-------|---|--------|
| 65A | FISIM | 44930 | In acc. with EU instructions | B |
| 65B | Banking services & other financial intermediation | 41322 | Weighted index, fund assets/wages SNI65 | A/C |
| 6601 | Life insurance | 6233 | Wage index SNI65 | C |
| 66020 | Pension fund services | 4381 | Wage index SNI66 | C |
| 66030A | Non-life insurance | 15443 | Weighted index, non-life ins. and OV | B |
| 66030B | Reinsurance | 2200 | Weighted index, non-life ins. and OV | B |
| 67 | Activities auxiliary to financial intermediation | 9875 | Wage index SNI67 | C |

For FISIM⁶ deflation is carried out in accordance with Eurostat's recommendations⁷.

Banking services and other financial intermediation consist mainly of fees for the management of investment funds and commissions on sales of securities. These fees and commissions are usually ad valorem charges. The value of the underlying assets and the percentage charged are used when constructing the price index (this is the A method part). A wage index for NACE 65 is used for the rest of various banking services.

Non-life insurance and reinsurance. Sweden is using the number of policies, by product (motor vehicles, households, etc) as a volume indicator for non-life insurance. The indicator is weighted by the output value (OV) of each insurance product. This method is considered a B-method according to paragraph 4.9.2 of the Handbook on price and volume measures.

3.2.11 Section K, Real estate, Renting and Business activities

| PG | Description | CrtP | Index | Method |
|--------|---|--------|----------------------------|--------|
| 70201A | Imputed rentals for owner-occupiers | 132016 | CPI dwelling | A |
| 70201B | Imputed rentals for secondary residences | 10863 | Weighted CPI | C |
| 70201C | Actual rentals paid by tenants | 95004 | CPI dwelling | A |
| 7020A | Other real estate letting | 91442 | SPI Premises Rentals index | A |
| 70A | Real estate management etc. | 18802 | Wage index SNI74 | C |
| 71100 | Motor vehicle hire (cars and vans) | 4837 | SPI vehicle hire | A |
| 71100A | Car benefits | 8473 | Own, tax authority | B |
| 71210 | Hire of other land transport equipment without driver | 1995 | ITPI | B |
| 71220 | Hire of ships and boats without master | 233 | ITPI | B |

⁶ Financial Intermediate Services Indirectly Measured

⁷ Council Regulation (EC) 98/448/EF, Official Journal of the EU

| | | | | |
|-----------|---|--------|---------------------------|---|
| 71230 | Hire of aircraft without crew | 1678 | ITPI | B |
| 713 | Hire of machinery and equipment | 17464 | ITPI | B |
| 7140 | Hire h.hold articles/goods for personal use | 3166 | KPI hire hh. articles | A |
| 7220 | Computer system and software consultancy | 49352 | SPI 7220 | A |
| 7220EG | Computer systems/software produced on own account | 12471 | SPI 7220EG | A |
| 72500 | Maintenance and repair of office and accounting machinery | 3895 | SPI72500 | A |
| 72A | Other data processing services | 50975 | SPI72A | A |
| 73 | Research and development | 20442 | Wage index SNI73 | C |
| 741 | Legal and business consultancy | 104574 | Wage index SNI741 | C |
| 741A | Licence, patent and royalty services | 13092 | EXPI goods | C |
| 742 | Architectural and technical consultancy | 72907 | Wage index SNI742+3 | C |
| 742A | Construction services abroad | 6235 | Weight index invest./rep. | C |
| 743 | Technical testing and analysis | 5622 | Wage index SNI742+3 | C |
| 744 | Advertising services | 45633 | Wage index SNI744 | C |
| 745 | Labour recruitment and provision of personnel | 646 | Wage index SNI745-8 | C |
| 746 | Investigation and security activities | 7650 | Wage index SNI745-8 | C |
| 747 | Cleaning and chimney-sweeping | 19240 | Wage index SNI745-8 | C |
| 748 | Other business services | 34779 | Wage index SNI745-8 | C |
| 730PEAR&D | | 13514 | cost calculation | B |

Data on car benefits are obtained from the National Tax Board [*Riksskatteverket - RSV*]. There is a model calculation for how car benefits should be taxed, and this can also be used for constant-price calculations. Product group 730PEA covers research in the public sector, which is often basic research in the fields of education/training and health care. This is a public service and the deflation of input can be classified as a B-method.

3.2.12 Section L, Public Administration and Defence, Compulsory Social Security

| PG | Description | CrtP |
|--------|--|---------|
| 75A | General public service activities | 2 516 |
| 75B | Other public administration | 10 259 |
| 75C | Defence, law enforcement and fire protection | 1 497 |
| 750PEA | Public administration | 157 510 |

Product groups 75A, 75B and 75C include chargeable non-market output. These are deflated by means of various partial indices from the CPI. 750PEA is public production for own final consumption. This group includes public services such as administration, defence, police and social security. These services are not sold on a market, hence there are no price measurements. The calculations are made from the costs side for the various components - i.e. wages, intermediate consumption, consumption of fixed capital and sales - and deflated as described in Section 3.5. These are essentially public services, so everyone can, in principle, consume the

same amount. Since it is difficult to define what constitutes the output, the use of input methods is classified as a B-method.

3.2.13 Section M, Education

| PG | Description | CrtP | Index | Method |
|--------|---------------------------|---------|-------------------|--------|
| 801 | Primary education | 1356 | Wage index SNI80C | |
| 802 | Secondary education | 234 | Wage index SNI80C | |
| 803 | Higher education | 268 | Wage index SNI80C | |
| 804 | Adult and other education | 15764 | Wage index SNI80C | |
| 80OPEA | Education | 126 503 | Cost calculation | C |

These services are consumed individually. Authorised methods for deflating are volume and price measurements for various components. Work is currently under way on developing calculation methods for deflation. Output from private companies within this branch is deflated using wage indices and public production (OPEA) by means of various indices relating to wages, intermediate consumption, consumption of fixed capital and sales. These methods are classified as C-methods.

3.2.14 Section N, Health and Social Work

| PG | Description | CrtP | Index | Method |
|---------|----------------------------------|--------|------------------------|--------|
| 85130 | Dental practice activities | 7766 | Index various measures | B |
| 85140 | Other human health activities | 3960 | Wage index SNI851 | C |
| 851A | Hospital activities | 9061 | Wage index SNI851 | C |
| 851B | Medical practice activities | 9188 | Wage index SNI851 | C |
| 85200 | Veterinary activities | 979 | Wage index SNI852 | C |
| 853A | Child care | 3735 | Wage index SNI853 | C |
| 853B | Care of the elderly and disabled | 7198 | Wage index SNI853 | C |
| 853C | Pers. assistant | 1057 | Hourly rate | B |
| 853D | Individual and family welfare | 2788 | Wage index SNI853 | C |
| 851OPEA | Health care | 99 608 | Cost calculation | C |
| 853OPEA | Welfare | 93334 | Cost calculation | C |

Health-care and medical services are consumed individually. Within the context of the CPIs, price measurements are made of the charges paid by households. These charges cover, however, only a small part of the output value, most of which is financed out of tax revenue. Deflation using CPI is therefore not possible without recourse to other methods such as volume and price measurements for various components of the services in question. Work is under way on developing indices in this area. Output from private companies within this branch is deflated using wage indices and public production (OPEA) by means of various indices relating to wages, intermediate consumption, consumption of fixed capital and sales. These methods are classified as C-methods.

3.2.15 Section O, Other community, social and personal service activities

| PG | Description | CrtP | Index | Method |
|--------|---|--------|-------------------|--------|
| 90 | Sewage and refuse disp. | 14023 | FPI/L-indSNI90 | C |
| 911 | Business, employers' and professional org. | 7173 | Wage index SNI91C | |
| 92B | Originals | 1904 | Wage index SNI92C | |
| 921 | Motion picture and video activities | 9633 | Wage index SNI92C | |
| 922 | Radio and television activities | 12098 | Wage index SNI92C | |
| 9231 | Artistic and literary creation and interpretation | 3073 | Wage index SNI92C | |
| 923A | Theatre, entertain. | 5126 | Wage index SNI92C | |
| 924 | News agency activities | 2055 | Wage index SNI92C | |
| 925 | Library, archive and museum activities | 466 | Wage index SNI92C | |
| 926 | Sporting activities | 2991 | CPI sport | B |
| 9271 | Gambling and betting activities | 8933 | CPI gaming | B |
| 9272 | Other recreational activities | 240 | Wage index SNI92C | |
| 9301 | Laundering and dry-cleaning activities | 3769 | Wage index SNI93C | |
| 9302 | Hairdressing and other beauty treatment | 6999 | Wage index SNI93C | |
| 9303 | Funeral and related activities | 1654 | KPI funer. | A |
| 9304 | Physical well-being activities | 1296 | Wage index SNI93C | |
| 9305 | Other service activities | 141 | Wage index SNI93C | |
| 91OPEA | Business, employers' and professional org. | 33 | Cost calculation | C |
| 92OPEA | Culture | 16 182 | Cost calculation | C |

These activities include a wide range of services. Price and volume indicators are largely lacking, but development work is under way.

Deflation is by means of wage indices for output from private companies within this area and by means of various indices relating to wages, intermediate consumption, consumption of fixed capital and sales for public production of these individual services. These constitute C-methods.

3.2.16 Section P, Private households with employed persons

| PG | Description | CrtP | Index | Method |
|---------|--|------|-------------|--------|
| 9500000 | Private households with employed persons | 271 | Hourly rate | B |

3.3 Intermediate consumption

The outputs of agriculture and manufacturing are covered respectively by rolling annual and three-yearly specific detailed information on intermediate consumption. Intermediate consumption of, for example, energy products under SNI 40 is studied on an annual basis at a detailed level. Detailed information is more sporadic for other output. The trend in intermediate consumption is then extrapolated for each year of calculation on the principle that intermediate consumption in constant prices remains constant relative to output value. The figures are then aligned with the values in the statistical sources for total intermediate consumption per branch.

In most cases the figures in the sources are the same as those in the Structural Business Statistics SBS. Adjustments can then be made when checking the balances in the supply- and use tables.

Deflation is by means of the price indices calculated on the basis of the figures in the use tables, i.e. the domestic supply [*inhemsk tillgång - IHT*] price indices as described in Section 2.10. For the product groups dealt with in the system as known values, data are calculated in both current and constant prices and deflation is by means of relevant price indices.

3.4 Household final expenditure

Deflation of final expenditure by households is carried out primarily on the basis of various partial indices from the CPI and the HICP⁸. This is an A-method. Deflation is by product group (258) and purpose (140). The various indices used in the CPI are shown in a separate annex. Volume indices are used for some sub-items such as petrol and domestic heating. The combined (implicit) index tends to be fairly close to the total CPI. The price change often differs by only a few tenths of a percent.

There are many reasons for the difference. One of them is that the weights used in the national accounts may differ from those used for the CPI. Another reason is that housing is treated differently in the national accounts and the CPI, and the coverage of consumption by households also differs somewhat. Consumption by Swedish households abroad, for example, is included in the national accounts, but consumption by foreign visitors in Sweden is not.

3.4.1 Deflators for consumption by Swedes abroad and by foreign visitors in Sweden

The data on subsistence costs abroad are deflated using a specially constructed price index based on data on the total CPI for a number of countries that are important destinations for Swedish tourists, and changes in the exchange rates and the relative importance of the destinations, obtained from occasional surveys.

A survey of "travellers' foreign exchange" [*resevaluta*] is carried out occasionally in order to obtain data on expenditure by Swedes abroad. Between these surveys, information on the relative proportion of purchases of foreign currency by Swedes accounted for by various currencies is used. Now that a number of important destination countries in the EU have introduced the Euro, we are in principle using the former distribution until further notice.

The IMF's monthly publication "Financial International Statistics" gives CPI data for the Member States. Sweden's central bank [*Sveriges Riksbank*] compiles

⁸ Harmonized Consumer Price Index

monthly exchange-rate data. The distribution of travellers' foreign exchange is also obtained from the *Riksbank*.

Data on expenditure in Sweden by foreign visitors are deflated using the total CPI for Sweden.

3.5 Government final consumption expenditure

Final consumption expenditure comprises the output value of the activities of general government - classified as other non-market producers - minus revenue from sales plus purchases from market producers of goods and services supplied direct to households without further processing as social transfers in kind (direct consumption). For the calculations, the figures are split into compensation of employees, consumption of fixed capital, other taxes on production, other subsidies on production, sales, other assets produced for own account and direct consumption. Data in current prices are obtained from the various sources.

For individually consumed public services the handbook on constant-price calculations states that constant-price calculation should be made for the services produced within each sector. Individual services are those that are consumed individually - e.g. medical care, education and cultural activities. Suitable measurements of output therefore include pupil hours and various medical treatments. In Sweden no calculations are at present made on the basis of output within the sector; constant-price calculation are made for all public services using input methods. Development work is under way, however. In view of the difficulties involved in producing definitions, collecting data and calculating output and price indices, the handbook also permits of deflation input variables at a detailed level.

3.5.1 Constant-price calculation by purpose and year

3.5.2 Primary municipalities

*Compensation of employees and other taxes on production, excluding special income tax on pensions, broken down by function (COFOG) are extrapolated in terms of volume on the basis of the change in the number of hours worked per function. Hours are calculated on the basis of a calculated hourly rate per function and the total wages paid per function. The hourly rate is obtained from the Association of Local Authorities [*Kommunförbundet*]. The total hours per function are aligned with the total hours worked in the primary municipalities in accordance with the national accounts employment calculations for hours worked. If the sum of the hours worked per function does not correspond to the total figure, all hourly rates per function are adjusted proportionally in order to bring the figures into line. Wages etc. are then calculated in constant prices for each of the purposes as follows:*

purpose xx

Wages in year t in prices for year t-1 = Wages in current prices year t-1*(number of hours worked in year t/number of hours worked in year t-1)

The special income tax on pensions and other subsidies on production are deflated on the basis of the agreements between the employer (primary municipalities) and the trade unions, i.e. changes in hourly rates.

3.5.3 County Councils [landsting]

Compensation of employees and other taxes on production, excluding special income tax on pensions, broken down by function are extrapolated in terms of volume on the basis of the change in the number of hours worked per function, for which figures are obtained from the Association of County Councils [Landstingsförbundet]. The sum of volume changes per function is aligned with the total hours worked in county councils in accordance with the national accounts employment calculations for hours worked. As from 2001 these calculations have been carried out in the same way as those for the primary municipalities.

The special income tax on pensions and other subsidies on production are deflated on the basis of the agreements between the employer (county councils) and the trade unions, i.e. changes in hourly rates.

3.5.4 Agencies and departments of central government

Compensation of employees and other taxes on production broken down by function are extrapolated in terms of volume on the basis of the change in the number of hours worked per function. The number of hours worked per function are estimated on the basis of the national accounts employment calculations for hours worked and the total number of persons employed by central government. The Structural Wage Statistics show the total wage bill per employee and function. By dividing the total wages per function in the national accounts by the total wages per employee in the Structural Wage Statistics, the number of employees per function can be obtained. The total number of employees per function is aligned with the total number of employees.

The number of hours worked per function is calculated on the basis of the annual wage sum per full-time employee from the Structural Wage Statistics [*lönesumma per helårsperson*] by comparing the wage sum per full-time employee and function with the total wage sum per full-time employee. The resulting proportions have subsequently been applied to the national accounts data on total hourly wages for the central government sector. Hours per function were then obtained by dividing the national accounts wage sum per function by the hourly rate.

Other subsidies on production are deflated using the change in the hourly rate. *Special income tax on pensions* is extrapolated in terms of volume on the basis of the change in the number of hours worked in agencies and departments of central government.

3.5.5 Primary municipalities, county councils and agencies and departments of central government alike

For *consumption of fixed capital* the same price indices are used as for deflating fixed capital formation.

Intermediate consumption in current prices is based the data collected and constant-price calculations are carried out in accordance with the principles described in Section 3.3. Deflation is by means of IHT indices for the product groups that are not dealt with as known values.

Sales within the public sector are deflated by means of relevant partial SPI, PPI and CPI indices and to a certain extent by means of the wage indices for certain services.

For the calculation of direct consumption (*social benefits in kind*) in constant prices, various unit prices, volume extrapolations and CPI are used, and, in the case of subsidies for medicinal products, which make up the biggest single item with SEK 15 billion, the sale price index of the state pharmaceuticals monopoly, "Apoteket", [*Apotekets utförsäljningsprisindex*] for the subsidised amount.

In a few years, the Member States of the EU should change over from using input-related measurements to output in constant prices, at least for individual services such as education, medical care, welfare and culture. National accounts development work is under way in these areas, both in Sweden and in other countries. In the case of collective services such as defence and the judiciary, however, it may be a long time before it is possible to find usable measurements of volume. It is difficult to define output: for example, is output greater if more houses burn down or the army conducts more exercises? Since there are no market prices or accepted measurements of output the handbook classifies the use of input methods as a B-method for collective services.

3.6 NPISH final consumption expenditure

As in the case of agencies and departments of central government, consumption by non-profit institutions serving households, NPISH, is calculated from the costs side as output value minus sales. Sales comprise the fees charged by non-profit institutions serving households for their services. The output value comprises compensation of employees and other taxes on production minus other subsidies on production and consumption of fixed capital and intermediate consumption. Value added is calculated as output value minus intermediate consumption.

Wages and wage-related costs are deflated by means of the wage indices for activities in which non-profit institutions serving households are engaged. Intermediate consumption, broken down over nine activities (purposes), is

calculated as fixed proportions of value added at constant prices. Conversion to current prices is by means of the implicit price indices for the product groups in question, which are produced as part of the coordination work for the supply- and use tables.

3.7 Gross fixed capital formation

3.7.1 Gross fixed capital formation at constant prices

Fixed capital formation involves the acquisition - i.e. purchase or production on own account - of new durable market products. It also includes imported used capital goods, while exported used capital goods are excluded. Conversions of and extensions to buildings and plant that increase their efficiency or life are also included as fixed capital formation. In the definitive annual accounts, constant-price calculations are made for gross fixed capital formation in the system using supply- and use tables broken down into the following products.

| PG | Description | CrtP | Index | Method |
|----------|-----------------------------|--------|--------------|--------|
| K 122801 | Trotting horses | 629 | Aprice/quant | A |
| K 012C | Dairy cattle | -225 | Aprice/quant | A |
| K 02012A | Forest drainage | 1 058 | unit value | B |
| 281 | Structural metal products | 3 039 | IHT | A |
| 28210 | Cisterns | 1 432 | IHT | A |
| 28220 | Radiators | 828 | IHT | A |
| 28300 | Steam generators | 1 536 | IHT | A |
| 286 | Tools | 1 140 | IHT | A |
| 287 | Other metal products | 5 497 | IHT | A |
| 291 | Mech. power machinery | 7 449 | IHT | A |
| 292 | Other machinery | 17 233 | IHT | A |
| 293 | Agricultural/forestry mach. | 4 837 | IHT | A |
| 2940 | Machine-tools | 4 624 | IHT | A |
| 29510 | Machinery for metallurgy | 183 | IHT | A |
| 29520 | Mining/construction | 5 467 | IHT | A |
| 29530 | Food, beverages | 1 091 | IHT | A |
| 29540 | Textiles etc. | 244 | IHT | A |
| 29550 | Pulp, paper | 1 136 | IHT | A |
| 29561 | Plastic, rubber | 13 | IHT | A |
| 29569 | Other special machinery | 4 870 | IHT | A |
| 29711 | Refrig., washing mach. | 2 514 | IHT | A |
| 29719 | Domestic el. app. | 937 | IHT | A |
| 29720 | Non-el. dom. non-el. app | 590 | IHT | A |
| 30010 | Office machinery. | 3 647 | IHT | A |
| 30020 | Computers | 28 560 | IHT | A |
| 31100 | Electric motors | 3 676 | IHT | A |
| 31200 | El. dist. measurements. | 3 626 | IHT | A |
| 31300 | El. Wire | 401 | IHT | A |
| 3150 | Lamps | 1 188 | IHT | A |
| 316 | Other el. apparatus. | 1 199 | IHT | A |

| | | | | |
|----------|-----------------------------|---------|----------------------|-----|
| 32200 | Radio/TV transmitters. | 15 883 | IHT | A |
| 32300 | Radio/TV recorders. | 1 147 | IHT | A |
| 33101 | Medical. Equipment | 3 085 | IHT | A |
| 33200 | Instr. for measurement | 4 520 | IHT | A |
| 3330000 | Instruments for control | 3 831 | IHT | A |
| 33400 | Instruments for optics. | 1 684 | IHT | A |
| 33500 | Watches and clocks | 254 | IHT | A |
| K 34100 | Motor vehicles | 31 103 | CPI | A |
| K 34100X | Used cars | 35 | EXPI/IMPI | A |
| 34200 | Bodies | 437 | IHT | A |
| K 35110 | Ships and boats | 1 305 | EXPI/IMPI | B/C |
| K 35110X | Second-hand ships and boats | 16 | IMPI | C |
| K 35200 | Railway vehicles | 3 593 | ITPI | C |
| K 35300 | Aircraft | 7 496 | ITPI | C |
| 3550000 | Other transport equipment | 297 | IHT | A |
| 361 | Furniture | 7 368 | IHT | A |
| 36300 | Musical instruments | 196 | IHT | A |
| 366 | Miscellaneous goods | 197 | IHT | A |
| K 45 | Construction | 107 044 | various | B/C |
| K 70A | Real estate services | 5 487 | Wage indices SNI70C | |
| K 7220 | Softw. purchases | 43 503 | SPI 7220 | A |
| K 7220EG | Softw. prod. own account. | 12 471 | SPI 7220EG | A |
| K 742 | Arch./Techn. services | 28 041 | Implicit all constr. | B |
| K 92B | Originals | 1 904 | Wage index SNI92 | C |

Certain fixed-capital-formation groups are regarded in the system as known values (K). Known values are not affected by the balance adjustments. For these, separate constant-price calculations are made. IHT indices are used for the others.

Machinery and means of transport. For "known" machinery and means of transport the relevant domestic supply price index [*Prisindex för Inhemsk Tillgång - ITPI*] is used. For cars CPI is used since VAT is not deductible for investment in cars in most branches. In, for example, the taxi branch - where the VAT is deductible - the CPI is corrected if the VAT rate changes. For other gross fixed capital formation in machinery and means of transport the IHT index for the current product is used. A-methods are used for these products.

Certain complex products (e.g. aircraft and ships) constitute exceptions in that C-methods are used. A hedonic import price index is used for PCs. Domestic supply is for the most part made up of imports. See Section 2.3.10, quality assessment for PCs, for a description of the method. This is an A-method.

Construction, product group 45.

Housing: Construction price index, A-method.

Holiday/weekend homes: Purchase price in accordance with trade association, adjusted for quality, B-method.

Agricultural buildings: Factor price index from the Board of Agriculture, C-method.

Other housing incl. conversion: development of construction price index for housing checked against factor price index, B-method.

Conversion of housing: Factor price index excluding wage drift, adjusted for changes in productivity etc., B-method.

Roads: deflated by means of the factor price index obtained from the National Road Administration [*Vägverket*], C-method.

Railways: deflated by means of the factor price index, C-method.

3.8 Changes in stocks

The values of stocks is equal to the value of goods entering stocks minus the value of goods withdrawn from stocks during the calculation period.

Change in stocks is calculated as the difference between the stocks at the beginning and end of the period in question. Stocks must be valued in both instances at the same price level. The value should be given in terms of the average purchase and sale price, respectively, for the period.

Quarterly and annual deflation of stocks. Data are collected on a quarterly basis for all types of stocks except those coming under "Other service branches", which are based on annual statistics.

| Type of stocks | Index | Method |
|--|-------------------------|--------|
| <i>Agricultural stocks</i> | | |
| Growing crops and animals for slaughter | unit price and quantity | A |
| <i>Forestry stocks</i> | | |
| Standing and felled timber | unit price and quantity | A |
| Intermediate consumption inventories of mines and manufacturing industry | ITPI | A |
| Work in progress and finished products of mines and manufacturing industry | PPI at branch level | A |
| Goods for sale of mines and manufacturing industry | PPI at branch level | A |
| Energy | unit price and quantity | A |
| Construction industry stocks | PPI at branch level | B |

| | | |
|--------------------------|-----------------------|---|
| <i>Trade inventories</i> | | |
| Motor and retail trade | CPI | A |
| Wholesale trade | PPI | A |
| Other service branches | Wage index for branch | C |

3.9 Acquisitions less disposals of valuables

3.9.1 Investment in entertainment, literary and artistic originals and valuables

This is calculated by means of a cost assessment based on current payments under copyright and other payments, such as royalties, that are mainly found in the fields of literature and music. Swedish film rights are defined somewhat differently on account of the type of data available. Revenue on a Swedish cinema film comprises the annual receipts - i.e. not copyright payments. Deflation is by means of the wage index for the branch. This is a C-method.

3.9.2 Acquisitions less disposals of valuables

"Valuables" are antiques and works of art such as paintings, stamps and various collector items. The Swedish method is based on a supply calculation with data on new Swedish production, export, import and trade margins. The item was introduced into the Swedish national accounts in December 2002. Deflation is by means of total CPI. This is a C-method.

3.10 Exports and imports of goods and services

Data on exports and imports of goods are spread over around 240 product groups in each case. Constant-price calculations are mainly carried out using export and import price indices. These are A-methods. Data from foreign-trade statistics are deflated at detailed CN level. The supplements to cover non-cross-border trade with the rest of the world are deflated at the level of the product group. The partial estimation of the CIF component concerns goods imported by sea and the deflator used is the same price index as used for deflating imports and exports by marine freight.

Data on exports and imports of services are spread over around 50 product groups in each case. The methods used for constant-price calculations are largely C-methods and in some cases B-methods. Price-index deflation is used in most cases, but volume extrapolation is also applied.

For the majority of services constant-price calculations of data on exports and imports for a given product group are carried out using the same price index as for domestic output in that group.

For example, data on exports and imports of consultancy services (product group 742) are deflated using the same wage-cost index as used for deflating data on the output of the consultancy branch. The reason for this is that little price-index information on service transactions with the rest of the world is available.

For a number of services, however, the constant-price calculations are carried out in a different way.

One example is data on travellers' foreign exchange (see Section 3.4.1).

Another is commissions on merchanting. Data on export commissions are deflated using the total import price index, on the assumption that price changes for goods imports will affect the commissions. Similarly, and for the same reason, import commissions are deflated using the total export price index.

Data on merchanting are deflated by means of import price indices for certain known product groups and by means of the total import price index for the remainder.

The Tables show the amounts for 2000 in current prices for the various services and the deflators used.

Export of services by product group and deflators used

| PG | Description | Crtp | Index | Method |
|--------|---|--------|--|--------|
| 5AA | Commissions | 4 835 | IMPI total | C |
| 5AB | Merchanting | 24 076 | IMPI _{tot.} +IMPI _{pg} | C |
| 60100A | Passenger transport by railway | 208 | CPI person, rail | C |
| 60100C | Goods transport by railway | 303 | CPI transport | C |
| 60230 | Passenger transport by bus | 67 | CPI, 6021A | C |
| 60240 | Goods transport by road | 6 686 | CPI, transport | C |
| 61A | Passenger tr. ship/boat | 683 | CPI _{ship/boat} journeys | C |
| 61B | Goods transport ship/boat | 22 509 | CPI, transport | C |
| 61C | Hire of ships and boats | 3 683 | Charter rates | B |
| 62A | Passenger transport, air | 1 483 | CPI internat. flight | B |
| 62B | Goods transp., air | 55 | CPI internat. flight | C |
| 62C | Hire of aircraft | 253 | C _{pinternat.} flight | C |
| 63220A | Port services | 802 | FPI, transport | C |
| 63220B | Pilotage and other navigation services | 814 | Revenue, pilotage | B |
| 63220C | Other supporting sea transport activities | 225 | FPI, transport | C |
| 63230 | Other supporting air transport activities | 1513 | CPI total | C |
| 63400 | Other transport agency services | 2 271 | FPI, transport | C |
| 641 | Post and courier activities | 801 | Price ind., large op. | C |
| 64201A | Telecomm. serv. excl. mob. | 5 125 | SPI _{telecom} | C |
| 65B | Bank serv., other fin.int. | 6 430 | Weig. index fundassets/wagesSNI65 | C |
| 6601 | Life insurance | 11 | Wage index SNI66 | C |
| 66030A | Non-life insurance | 2174 | Weighted index other ins. + OV | C |
| 66030B | Reinsurance | 2 200 | Weighted index other ins. + OV | C |
| 67 | Activities auxiliary to fin. intermediation | 356 | Wage index SNI67 | C |
| 71210 | Hire of land transport equipment, ex. cars | 978 | Wage index SNI71 | C |
| 71230 | Hire of aircraft without crew | 978 | Wage index SNI71 | C |
| 713 | Hire of machinery and equipment | 489 | Wage index SNI71 | C |
| 7220 | Computer system/ software consultancy | 9 148 | SPI 7220 | B |
| 72A | Other data processing services | 2 907 | SPI 72A | B |
| 73 | R&D | 5 803 | Wage index SNI73 | C |

| | | | | |
|-------|---|--------|-----------------------------|---|
| 741 | Legal and business consultancy | 5 976 | Wage index SNI741 | C |
| 741A | Licence, patent | 17 615 | EXPI total | C |
| 742 | Architect., tech. consultancy | 14 291 | Wage index SNI742+3 | C |
| 742A | Construction services abroad | 6 235 | weighted index invest + rep | C |
| 743 | Technical testing and analysis | 3 038 | Wage index SNI742+3 | C |
| 744 | Advertising | 3 945 | Wage index SNI744 | C |
| 748 | Other business services | 11 305 | Wage index SNI745-8 | C |
| 75A | Gen. public serv. and foreign affairs | 1033 | CPI total | C |
| 75C | Defence | 355 | Wage index SNI745-8 | C |
| 90 | Sewage and refuse disposal, etc. | 156 | Wage index SNI90 | C |
| 921 | Motion picture and video activities | 424 | Wage index SNI92 | C |
| 922 | Radio and television activities | 413 | Wage index SNI92 | C |
| 9231 | Artistic,literary creation and interpretation | 507 | Wage index SNI92 | C |
| 924 | News agency activities | 351 | Wage index SNI92 | C |
| 99902 | Foreign consumption in Sweden | 38 534 | CPI relevant products | A |
| XXXX | CIF Component | -2 306 | See pg 61B | C |

Import of services by product group and deflators used

| PG | Description | Crtp | Index | Method |
|--------|---|-------|-----------------------------------|--------|
| 55A | Restaur/bar services | 67 | CPI | C |
| 5B | Commissions | 4 750 | EXPI total | C |
| 60100A | Passenger transp., rail | 153 | CPI pass. tr., rail | C |
| 60100C | Goods transp. Rail | 282 | FPT transport | C |
| 60230 | Passenger transp. bus | 90 | CPI 6021A | C |
| 60240 | Goods transp., road | 753 | FPI transport | C |
| 61A | Passenger, ship/boat | 168 | CPIhip/boat journeys | C |
| 61B | Goods transport ship/boat | 821 | FPI transport | C |
| 61C | Hire of ships/boats | 5 237 | Charter rate | B |
| 62A | Pass. transp air | 7 758 | CPI internat. flight | B |
| 62B | Goods transp air | 58 | CPI internat. flight | C |
| 62C | Hire of aircraft | 205 | CPI internat. flight | C |
| 63110 | Cargo handling | 2 252 | FPI transport | C |
| 63120 | Storage and warehousing | 321 | FPI transport | C |
| 63220A | Port services | 1 067 | FPI transport | C |
| 63220B | Pilotage and other navigation services | 106 | Revenue/pilotage | B |
| 63220C | Other supporting sea transport activit. | 58 | FPI transport | C |
| 63230 | Other supporting air transport activities | 318 | CPI total | C |
| 6330A | Other travel org. / tourist ass. | 218 | CPIpackage tours | C |
| 63400 | Other transport agency services | 3 134 | FPI transport | C |
| 641 | Post and courier activities | 904 | Price ind. large op. | C |
| 64201A | Telecomm. serv. excl. mob. | 6 484 | SPItelecom. | C |
| 65B | Bank serv., other fin.int. | 5 645 | Weig. index fundassets/wagesSNI65 | C |
| 6601 | Life insurance | 179 | Wage index SNI66 | C |
| 66030A | Non-life insurance | 469 | Weighted index, other ins. and OV | C |
| 66030B | Reinsurance | 1 873 | Weighted index, other ins. and OV | C |
| 67 | Activities auxiliary to fin. intermediation | 333 | Wage index SNI67 | C |
| 71210 | Hire of land transport equipment | 493 | Wage index SNI71 | C |
| 71230 | Hire of aircraft without crew | 493 | Wage index SNI71 | C |

| | | | | |
|-------|---|--------|-------------------------------|---|
| 713 | Hire of machinery and equipment | 248 | Wage index SNI71 | C |
| 7220 | Computer system/ software consultancy | 7 917 | SPI 7220 | B |
| 72A | Other data processing services | 3 215 | SPI 72A | B |
| 73 | R&D | 7 714 | Wage index SNI73 | C |
| 741 | Legal and business consultancy | 7 796 | Wage index SNI741 | C |
| 741A | Licence, patent | 8 386 | EXPI total | C |
| 742 | Architect., tech. consultancy | 23 914 | Wage index SNI742+3 | C |
| 742A | Construction services abroad | 2 953 | Weighted index invest and rep | C |
| 743 | Technical testing and analysis | 46 | Wage index SNI742+3 | C |
| 744 | Advertising | 10 652 | Wage index SNI744 | C |
| 746 | Labour recruitment, provis. of personnel | 79 | Wage index SNI745-8 | C |
| 747 | Investigation and security activities | 94 | Wage index SNI745-8 | C |
| 748 | Cleaning and chimney-sweeping | 15 872 | Wage index SNI745-8 | C |
| 75A | Gen. public serv. and foreign affairs | 38 | CPI total | C |
| 90 | Sewage and refuse disposal etc. | 180 | Wage index SNI90 | C |
| 921 | Motion picture and video activities | 319 | Wage index SNI92 | C |
| 922 | Radio and television activities | 312 | Wage index SNI92 | C |
| 9231 | Artistic, literary creation/ interpretation | 578 | Wage index SNI92 | C |
| 924 | News agency activities | 734 | Wage index SNI92 | C |
| 99901 | Consumption by Swedes abroad | 74 479 | CPI,exchange rate, weighted | B |
| XXXX | CIF component | 6 915 | See 61B | C |