

# **ESA95 GNI INVENTORY**

**Sweden**

**Reference year 2005**

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# Chapter 1 Overview of the system of accounts

## 1.1 Introduction

The Swedish economy is usually described, relatively speaking, as a small and open economy with a fairly high incidence of public sector activity. The table below shows the different main aggregates and their relation to GDP.

**Table 1 Balance of resources in 2005, SEK billions (percentage contribution to GDP)**

GDP	2 735	Household consumption	1 328	(49)
Imports	1 121 (41)	General government consumption	723	(26)
		Gross fixed capital formation	472	(17)
		Changes in inventories	-4	
		Exports	1 333	(49)

### 1.1.1 Strategies

Complete calculations of the Swedish national accounts are currently only undertaken for the production and expenditure sides, respectively. Independent industry-by-industry calculations of GDP from the income side were undertaken partly as an experiment for the period 1980-1993. Since the changeover to SNA93, however, complete income calculations have not been carried out although it is the intention to resume them.

The main approach in the calculations is somewhat geared to the expenditure side. The statistical basis is well developed, with possibilities for comparison between different independent sources. The annual calculations are balanced in a system of supply and use tables. These form the basic tables, which can be further developed to input/output tables. The system also includes employment calculations, with average numbers of employees and hours worked.

### 1.1.2 Geographical coverage

The national economy consists of units, which have a centre of economic interest located within the economic territory of Sweden. Swedish territory comprises the area lying within Sweden's borders with the addition of Swedish ships and aeroplanes in international traffic, Swedish fishing boats fishing in international waters and Sweden's embassies and consulates abroad. Conversely the embassies of foreign countries in Sweden etc. are counted as foreign territory.

The units need not have the same nationality as the country itself. They may but need not be legal entities. They need not be present within the economic territory of the country at the time they execute a transaction. A unit has a centre of economic interest in Sweden if it is located within the economic territory of Sweden and engages in economic activities and transactions to a significant extent over a period of at least one year. 9 million people live in Sweden. The total land area, including lakes, is a little under 450 000 km<sup>2</sup>. Hence Sweden is the third largest country in the EU in terms of land area. In terms of number of inhabitants, however, Sweden takes number fourteen.

### **1.1.3 Organisation and responsibility within the national statistical institute**

The production of statistics and responsibility for the various statistical areas is organised in such a way that Statistics Sweden (*Statistiska centralbyrån* – SCB) has overall responsibility for the coordination and supervision of official statistics and for the development of statistical nomenclature and classifications. In addition Statistics Sweden is responsible for coordinating international statistical reporting and contributes actively to international cooperation.

Statistics Sweden has direct responsibility for official statistics in certain general areas of society. This applies, for example, to the labour market, the economy, industry and prices, the population and welfare as well as to housing and construction. In a number of other areas of society, some 25 other agencies bear the responsibility for official statistics. The production of these statistics is effected partly by Statistics Sweden and partly by other producers of statistics.

The real economy accounts as well as the financial calculations are produced in Statistics Sweden's national accounts unit. As regards non-resident transactions, which affect GDP and GNI, Statistics Sweden with effect from September 2007 collects data on commission of the Swedish Central Bank. The Central Bank though has the responsibility for the Balance of Payment. All the material is subsequently incorporated into the national accounts. Analyses and comparisons of the different statistical and administrative material are conducted continuously by the national accounts staff responsible for the area concerned. Almost 60 persons work in the national accounts unit.

## **1.2 Revisions policy and timetable for revising and finalising the estimates**

### **1.2.1 Revisions policy**

Revisions, in other words data changes relating to a period for which publication has already taken place, are a normal part of the work on the national accounts. They stem from a number of factors. The first accounts for a period are published very soon after the close of the period to be reported on. They are based on preliminary data and must therefore be revised when more final material becomes available. Another reason may be reorganisations of the statistical basis, or the appearance of new statistics, which may impose the need for revisions to the national accounts.

In Sweden, as regards *current revisions*, i.e. revisions carried out as the statistical basis becomes more final, a relatively strict policy on the timing of revisions is applied, while other revisions relating to longer periods do not follow such clear policy.

The first compilation of the national accounts for a certain year is published no more than 60 days after the close of the year.

Data relating to the previous year can be revised in connection with the compilation of the first quarter of the following year.

The previous year is also revised in the *preliminary annual calculation*, which is published after 11 months in conjunction with the final annual calculation for t-2, which is published after 23 months. Then all available data material will have been incorporated for the final year and balanced in the system of supply and use tables. After the final annual calculation no year is normally revised except in conjunction with major revisions.

Other *revisions*, covering *longer periods*, are carried out at less frequent intervals. There is no strict timetable for such revisions. One major revision carried out on the Swedish national accounts was the introduction of SNA93/ESA95, which was published in May 1999. Apart from adaptation to new international standards this also involved changes in classifications, a major review of calculation methods and incorporation of new data material. The new accounts have been implemented on the most detailed level with effect from 1993. Other major revision affecting the whole period have been carried out in 2002 and 2007 respectively.

### **1.2.2 Timetable for the processing and completion of the accounts**

The Swedish national accounts comprise both annual and quarterly accounts. The annual and quarterly accounts are fully integrated so that the quarterly accounts are fully adjusted to annual data when these are available. As has been noted, the first compilation of the national accounts for a given year is published within 60 days after the close of the year and is based to a considerable extent on the *quarterly accounts*.

The *annual accounts* are published in November. Preliminary annual accounts are then published for year (t-1) and final accounts for year (t-2).

The final accounts are based on complete and detailed primary statistics. As regards the product accounts, processing takes place in a detailed system of supply and use tables. The annual accounts also include non-financial sector accounts with accounts for primary and secondary income distribution, income use and capital formation for institutional sectors. In addition also financial sector accounts covering assets and liabilities as well as financial savings are produced.

The statistical basis, which is normally used for the annual accounts, is incorporated into the preliminary annual accounts in so far as it is available at the time of calculation.

The preliminary annual accounts are currently not balanced in the system of supply and use tables.

For the period 1950 to 1992 national accounts data are available only on a much more aggregated level. Level changes introduced into the accounts because of the availability of better statistics are generally adjusted by the use of previous figures for changes. Back-casting on a more detailed level will be performed during 2009.

## 1.3 Outline of production approach

### 1.3.0 Output of market producers and producers for own final use

The term market producers and producers for own final use (Näringslivet), also cover central and local government public service undertakings. Producers for own final use include the investment in roads and railways of the central government agencies National Road Administration and National Rail Administration, housing services in owner-occupied dwellings and local government construction investment. The table below shows production values, intermediate consumption and value added in 2005 for the total economy in SEK m.

**Table 2 Production values, intermediate consumption and value added in 2005 for the total economy in SEK.**

<b>SNI (NACE) industry</b>	<b>Output value</b>	<b>Interm. Cons.</b>	<b>Value added</b>	<b>Percent TGVA</b>
01 Agriculture	38977	27016	11961	0,50
02 Forestry	21016	7366	13650	0,57
05 Fishing	1364	775	589	0,02
10-14 Mining and quarrying	22484	10790	11694	0,49
		114218		
15-37 Manufacturing	1612211	6	470025	19,68
40-41 Electricity, gas and water supply	111688	41581	70107	2,94
45 Construction	221558	112553	109005	4,56
50-52 Trade and repair services	421528	154123	267405	11,20
55 Hotels and restaurants	82406	47027	35379	1,48
60-64 Transport, storage and communication	474929	312316	162613	6,81
65-67 Financial intermediation	157234	50658	106576	4,46
70-74 Real estate, renting and business activities	899124	410411	488713	20,46
80 Education	25397	9916	15481	0,65
85 Health and social work	71168	21942	49226	2,06
Oth.community, social, personal service act.				
90-93	110248	62297	47951	2,01
Private households with employed persons	697	0	697	0,03
GVA market prod. & prod. for own final use	4272029	241095	186107	
		7	2	77,93
Authorities of central government			128 047	5,36
Authorities of local government			362 577	15,18
NPISH			36 466	1,53
			2 388	
Total gross value added			162	100

### 1.3.1 Reference framework and main data sources

#### 1.3.1.1 Business database, FDB

All statistics intended to provide information on the Swedish economy presuppose that there should be coordination of definitions of inquiry units, industries, size criteria, ownership categories and other recording variables. This in turn imposes the need for registers, which describe these links and the status of the various units at different points in time. Such a register constitutes the framework for all economic statistics. These basic



requirements of coordination are met with the aid of Statistics Sweden's business register. The register covers enterprises, departments and agencies of government, organisations and their activity units. Each enterprise has a unique corporate identification number and each activity unit has a number unique to it, which makes it possible to computerise the information and to establish links between different materials providing statistical information.

The business register is a situation register in which circumstances at a particular point in time are described. From a statistical point of view, however, it is more relevant that the register should describe circumstances at different points in time. Information on changes is therefore also stored and documented. By specifying the time at which changes take place it is possible to follow the populations to be studied and at any time to update sampling frames and samples for changes which have taken place and which are relevant to the period to be reported on.

In 2000 the business register was reorganised and is now divided up into two different parts, FDB-R, which contains legal entities and business establishments, and FDB-S, which constitutes the statistical register. Here the enterprises are grouped into the statistical units: enterprise unit, kind of activity unit and local kind of activity unit. The FDB is a comprehensive register covering all enterprises in the country. Thanks to coordinated sampling, in which branches of statistics use the same register and sampling frame, all enterprises are included in the inquiry population. No enterprises are excluded, which might easily be the case if different registers were used for different branches of statistics. To sum up, it can be said that the Business database ensures the maintenance of very high quality.

#### *1.3.1.2 Sources*

Since the start of 1997 the Business statistics (*Företagsstatistiken* – FS) conforming to the EU regulation on Structural Business Statistics (SBS) have been the main source for the output calculations. However, the statistics are considerably more comprehensive than is required by the Regulation. They cover all industries apart from financial corporations. In the Business statistics major enterprises are surveyed by questionnaire. For all the other enterprises administrative material from the Swedish Tax Agency is used in combination with sample surveys for information on specific activities on a detailed level.

For certain industries, however, sources other than the structural business statistics are also used. For agriculture, forestry and fishing, material from the Swedish Board of Agriculture, the Swedish University of Agricultural Sciences, the National Board of Forestry and the National Board of Fisheries is also used. For SNI 40-41 Electricity, gas, heat, water and sewage plants, the structural business statistics are used but the energy statistics also play an important role here. SNI 45 Construction is calculated from the expenditure side as the sum of investment in and repairs to buildings and structures. For the service industries, the structural business statistics are the main source, and for SNI 62 Air transport, complementary detailed special statistics are used and, for SNI 65-67 Financial activity, the main source are financial market statistics. For Mining and Manufacturing, the Industrial goods production is used in combination with the SBS.

The Business statistics are structured somewhat differently for different industries. Industry as a whole is surveyed by activity units, whereas service industries are surveyed mainly on an enterprise level. Service industries are supplemented in the structural

business statistics by those activity units in industrial enterprises, which are classified as service industry units and reduced by those activity units in service enterprises, which are classified as industrial units.

Prior to 2003 several other inquiries apart from the structural business statistics were used in order to verify and supplement the structural business statistics. Intermittent sample surveys of the service industries were produced, in which data were collected on a more detailed level than was collected in the structural business statistics. From 2003 and onwards all the old surveys are integrated into the SBS and therefore also conducted annually. This has meant a great quality improvement in the source material for the national accounts.

### **1.3.2 Valuation**

Output is valued at the basic price, i.e. the price the producer receives excluding all taxes and including any subsidies received on products. This valuation is also used in the primary statistics.

Intermediate consumption is valued at the purchaser's price, i.e. the price paid by the enterprises for products exclusive of deductible VAT. This valuation also coincides with the valuation obtained in the primary statistics. Value added is obtained residually and is thus correctly valued at the basic price.

### **1.3.3 Transition from private accounting data to national accounting concepts in accordance with ESA95**

A number of corrections to output and intermediate consumption values have to be made in order to obtain the definitions required by ESA95. Discrepancies between company accounting and ESA95 mean that most industries need to be adjusted for the same differences in definition. The primary statistics may show slight differences in structure, so that some adjustments only concern certain industries.

### **1.3.4 Use of direct and indirect methods**

Indirect methods are used in order to calculate the value of output for some industries and sub-industries.

For agriculture the main method is quantity \* price compilations. Output of standing timber in forestry is provided by a calculation model in which increment is estimated with the aid of measurements on sample plots. Volume increment is extrapolated in cubic metres and multiplied by a standing timber price. Volumes of timber felled in forestry are also measured indirectly. Construction output is calculated as the sum of investment in and repairs to buildings.

The value of output for owner-occupied dwellings is compiled by taking the price per square metre for rented dwellings and multiplying by the total area of owner-occupied housing based on information from the real-estate assessment register. The calculations are performed stratified by various categories and regions in accordance with EU directives.

The value of output in distribution (trade margins) is calculated in the system of supply and use tables. However, value added is obtained by the direct method from the Structural Business statistics. In this way intermediate consumption in distribution is obtained residually.

### **1.3.5 Roles of benchmarks and extrapolation**

Benchmarks and extrapolation are used to a minor extent in the calculations. When used it is only for certain parts of the value of output or in some cases to determine intermediate consumption.

Intermediate consumption in construction is based on a benchmark but checked annually with the ratio between intermediate consumption and production of the SBS.

### **1.3.6 Exhaustiveness**

The calculations from the output side are mainly based on the SBS. This is a comprehensive material, which includes all industries. For agriculture, forestry, fishing, financial corporations and construction output, however, other source material is also used. For some industries the data of the SBS are supplemented by material from other sources/inquiries in order to allocate figures on a more detailed level.

Explicit supplements to the value of output for unrevealed production have been applied for a number of industries. In addition also intermediate consumption has been reduced in some industries. Explicit supplements have been made for illegal activities. In this context alcohol and tobacco, drugs, prostitution and gambling are included.

In construction, output is measured with the aid of investment in and expenditures on repairs, so that the problem of concealed activity in the construction industry is substantially reduced. An explicit supplement for construction carried out on work on owner-occupied dwellings is made.

Studies conducted by the National Audit Office in 1998 and the Swedish Tax Agency in 2006 have been used as a basis for the estimates of the black economy. However, the nature of these activities imply that it is difficult to quantify the value of hidden output or value added from studies, so that the scope of the supplements undertaken also have to be based on assessments and analyses. In some cases also other sources have a tendency to be somewhat relevant. Comparisons between supply and use of products on a detailed level can be very valuable in these circumstances.

*Income in kind (benefits) and gratuities.* The Tax Agency has a long list, instruction SKV 304, on what items that should be recorded as benefits in kind. Estimates are included in the annual income declaration collected. The most important form of income in kind in Sweden consists of the car benefits, which an employer provides for his employees. Concessionary cars are imputed to the employer's output value and household consumption. Other benefits in kind are e.g. meal benefits and housing concessions. Meal benefits arise almost exclusively through the sale by an employer of restaurant vouchers at reduced prices to his employees. This benefit is included in the supplement applied to household consumption expenditure in relation to the results of the household budget

surveys. Housing concessions are captured in the calculation model applied. A rental value is calculated for all dwellings in the country and is assigned to final use.

Gratuities are relatively uncommon in Sweden. It is mainly in the restaurant and taxi trades and possibly in hairdressing that tips are given.

**Table 3 Table showing hidden activity, explicit supplements**

NACE		GVA mill. SEK	Hidden	Percent
A	Agriculture, hunting and forestry	25 611	2 681	10,5
B	Fishing	589	185	31,4
C	Mining and quarrying	11 694	48	0,4
D	Manufacturing	470 025	5 188	1,1
E	Electricity, gas and water supply	70 107	0	0,0
F	Construction	109 005	15 975	14,7
G	Trade and repair services	267 405	4 478	1,7
H	Hotels and restaurants	35 379	5 825	16,5
I	Transport, storage and communication	162 613	8 433	5,2
J	Financial intermediation	106 576	353	0,3
K	Real estate, renting and business activities	488 713	22 053	4,5
M	Education	15 481	649	4,2
N	Health and social work	49 226	3 306	6,7
O	Other community, social and personal service activities	47 951	10 558	22,0
P	Private households with employed persons	697	174	25,0
	GVA market prod. & prod. for own final use	1 861 072	79 906	4,3
	Authorities of central government	128 047	0	
	Authorities of local government	362 577	0	
	NPISH	36 466	0	
	Total gross value added	2 388 162	79 906	3,3

## 1.4 Outline of income approach

### 1.4.1 Reference framework

It is currently not possible to calculate GDP independently from the income side. The calculations carried out for the economy as a whole are derived from GDP at market prices, determined in the calculations of production and expenditure. In the industry-by-industry calculations for market producers and producers for own final use the sum of operating surplus and gross mixed income is obtained as a residual item. Mixed income of the household sector is obtained residually, reduced by known values for the other income components.

**Table 4**

		2005, SEK m
GDP at market prices		2 735 218
Consumption of fixed capital		336 152
Wages and salaries		1 098 098
	Declared	1 062 722
	Withheld (black)	35 376
Social contributions		401 930
Taxes on production		463 212
Subsidies		54 631
Operating surplus, net	Total (residual)	490 457
	Non-financial corporations	237 880
	Financial corporations	41 684
	Central government	0
	Local government	-2 750
	Social security	0
	Households (residual)	213 643
	Owner-occupied dwellings	56 376
Mixed income (residual)		157 267

### 1.4.2 Main data sources

#### 1.4.2.1 Consumption of fixed capital

Consumption of fixed capital denotes the reduction in value, which an asset undergoes as a result of the limitation of its economic life. The calculations for depreciation of fixed assets found in accounting material covering the departments and agencies of government and non-profit institutions serving households follows classification and valuation principles different to those used for capital consumption in the national accounts system. It was therefore necessary to construct a special calculation system for consumption of fixed capital in the national accounts. In the national accounts consumption of fixed capital is valued at replacement cost (known as current cost accounting).

Consumption of fixed capital is calculated on the basis of information available on fixed capital stocks. The value of these can be obtained by direct calculation based on knowledge of the number of assets and their market prices. Such calculations are made for permanent dwellings, holiday homes and various types of transport equipment. Alternatively the value of the asset stock is calculated by accumulation of consumption of fixed capital.

The main sources for the calculation of consumption of fixed capital are thus data on gross fixed capital formation and the corresponding deflators, numerical data, prices for various items of transport equipment and tax assessment values for dwellings and holiday homes.

#### *1.4.2.2 Wages and salaries*

The total value of wages and salaries for the economy as a whole is based chiefly on Statistics Sweden's statistical processing of the annual income statements (*kontrolluppgifter* – KU) from employers to the tax authorities. In addition certain supplements and deductions are included relating to demarcations, reclassifications and under-coverage. The income statements are annual statements of gross cash wages and other taxable emoluments, which resident employers render to income recipients and the tax authorities prior to tax assessment.

Statistics Sweden's payroll statistics based on income statements (KU) are the sole and obvious source for the estimation of total wages and salaries. The strength of these statistics lies in their complete coverage of the data-providing units and their consistent classification by sector and industry in accordance with the Business database (FDB). Classification by industries is geared to both institutional and functional units, an indispensable basis for cross-classification of factor inputs. Under-coverage may arise because not all employers comply with their obligations under the tax assessment legislation or because the corporate identification number of the enterprise (which is used to identify the unit) is missing in the FDB for one reason or another, which gives rise to a supplement covering about 4.7 per cent of the payroll total.

#### *1.4.2.3 Social contributions*

The term "social contributions" (*sociala avgifter*) is used in the Swedish national accounts to denote the major part of pay-related compulsory social contributions and employers' contributions regulated by agreement.

Social contributions laid down by law are calculated with the aid of data from the National Social Insurance Board. Data on social contributions regulated by agreement for employees of departments and agencies of government and local and central government public-service undertakings are obtained from the records of the Swedish Financial Management Authority (ESV). Statistics Sweden's summaries of local government and county council accounts and from the National Government Employee Salaries and Pensions Board (SPV). Data on enterprise contributions regulated by agreement are obtained from the Financial Supervisory Authority, Statistics Sweden's financial statistics for enterprises and the Pensions Registration Institute (PRI).

#### *1.4.2.4 Taxes and subsidies on production*

The calculations for central government taxes on production and subsidies are chiefly based on the records of the Swedish National Financial Management Authority for the income of departments and agencies of government by revenue headings, which are recorded on a monthly basis. The costs of local government subsidies are based on the summaries of local government accounts. Data on EU taxes on production and subsidies are also obtained from ESV.

#### *1.4.2.5 Operating surplus, net*

##### *Non-financial corporations*

Operating surplus, net, is calculated for the sector as a whole. The basis is the enterprise-based material for the sector, which is available from the Business statistics. Since this material is not fully adapted to national accounts definitions, adjustments are made to it and supplements provided for the under-coverage of tenant-owners' associations.

##### *Financial corporations*

This institutional sector has a demarcation, which coincides with the functional industries SNI 65-67. Other taxes on production, net, wages and salaries and social contributions as well as capital consumption are deducted from value added at basic prices in these industries in accordance with the sources referred to above.

##### *Local government*

The operating surplus is generated in the local government public service undertakings. The calculation is geared to sales and deducts wages and salaries, social contributions, other taxes on production and consumption of fixed capital. These components are calculated in the same way as for the non-market producers of the local government sector.

##### *Social security*

The value arises from the real estate management of the National Pension Fund. The profit-and-loss account for this activity is included in the end-of-year accounts of the fund.

##### *Owner-occupied dwellings*

These comprise homes and holiday/weekend homes in private ownership. Real estate tax is deducted from value added and a supplement is applied for the value of other subsidies in accordance with data from the Swedish Financial Management Authority (ESV). Consumption of fixed capital is calculated in a model based on data from real estate tax assessment and real estate price statistics. In the model, a geometric rate of capital consumption by 1.21 percent for owner occupied dwellings and 1.28 for holiday homes is applied. These rates correspond to average service lives of 75 and 70 years respectively. The share of owner occupation in the total of individual houses and holiday homes is 93 per cent. This rate is based on data from real estate tax assessment.

### 1.4.3 Independence in relation to other strategies

The income approach, as it currently features in the Swedish national accounts, is dependent on both the production and expenditure approaches in the final balancing process.

However, the various components are more or less independent of other strategies. In the income approach total wages and salaries are obtained from the income statements (KU). This source is separate from the Business statistics and sources for the general government sector, but constituent units in the various sources are coordinated through the Business database (FDB). Wage and salary data for non-profit institutions serving households are based entirely on income statements. Social contributions, as regards the legally compulsory portion, are measured with reference to the income of general government. The portion regulated by agreement, which is based on insurance, is measured through the insurance companies. In the case of provision by transfer to an account within the enterprise, the measurement takes place both at enterprise level and through the Pensions Registration Institute (PRI), which registers pension funding by transfers to special accounts. In the general government sector social contributions are measured using the same source as in the production and expenditure approaches.

#### *Operating surplus*

Sector-by-sector operating surpluses in non-financial corporations, financial corporations, municipalities, social security institutions and owner-occupied housing is calculated from the same sources as the corresponding output calculations. Mixed income of households is obtained residually.

### 1.4.4 Valuation and recording

The following is a summary of the valuations and recording applicable to the income approach for the economy as a whole:

- GDP at market prices measured from the expenditure and production side.
- Taxes on production. For taxes on products see section 1.3. Other taxes on production are based on the data from the ESV, which are recorded monthly and on a cash basis and are period-reallocated in order to obtain accrued values. In practice income is time-lagged, for example income for February to January is recorded as income for the calendar year.
- Subsidies. Expenditure without period reallocation.
- Wages and salaries. The total of wages and salaries reported in the income statements indicates wages paid in cash, including benefits recorded in the year they are paid. Compensation during sick leave etc. paid by the employer is also included.
- Social contributions. Compulsory social contributions are recorded on payment with period reallocation by one month. Agreement-regulated contributions follow accounting principles in enterprises and insurance corporations and the records of departments and agencies of government.
- Net operating surplus, non-financial corporations. Accounting data are adapted to national accounts concepts, inter alia for the valuation of inventories and costs of financial leasing. Accounting values for capital consumption are replaced by calculated values and valuation at replacement cost (current cost accounting).



- Net operating surplus, financial corporations. The operating surplus is calculated residually on the basis of value added at basic prices in accordance with the output calculations.
- Net operating surplus, general government sector. These are obtained from the accounts of the municipalities. The values are calculated for consumption of fixed capital.
- Net operating surplus, owner-occupied dwellings. Value added in accordance with the output calculations. The values are calculated for consumption of fixed capital.
- Consumption of fixed capital. Calculated in a model based on capital stocks valued at replacement cost and geometric rates of capital consumption (PIM method).

#### **1.4.5 Transition from private accounting data to national accounts concepts**

The procedure is as described in sections 1.4.2.5 and 1.4.4 above.

#### **1.4.6 Use of direct and indirect measurement methods**

The following is a summary of the procedure as regards the income approach and the economy as a whole:

- Measurement methods for GDP are in the main direct.
- Taxes on production and subsidies are measured directly.
- Wages and salaries are measured directly with the aid of administrative material. Supplements are calculated for wage and salary payments not reported.
- Social contributions are measured directly.
- Net operating surplus for non-financial corporations is measured directly and adjusted for certain definitional differences. The adjustments are subject to certain indirect calculation effects. The operating surplus of financial corporations is measured as value added less net of production taxes and subsidies. The same applies to owner-occupied dwellings and mixed income. The operating surplus of the general government sector is measured directly.
- Consumption of fixed capital is based on a calculation model.

#### **1.4.7 Roles of benchmarks and extrapolation**

In the present calculations in accordance with ESA 95 the operating surpluses of non-financial corporations in 1996 have been extrapolated for earlier years on the basis of calculations in accordance with older systems.

#### **1.4.8 Exhaustiveness**

The income approach in the current structure for the economy as a whole has the completeness determined by GDP in the calculations of output and expenditure.

## **1.5 Outline of the expenditure approach**

### **1.5.1 Household final consumption expenditure**

#### *1.5.1.1 Reference framework*

##### *Households and non-profit institutions serving households (NPISH)*

Household consumption consists of all expenditure of Swedish households on goods and services in their role of consumers. Consumption may take place both in Sweden and abroad, so that tourist expenditure and expenditure of diplomats and military personnel abroad are included.

Added to actual household consumption expenditure is an expenditure item not allocated to purpose, consisting of consumption in non-profit institutions serving households (NPISH). NPISHs include associations working to promote the interests of households without any profit function. Bodies such as trade unions, churches, political parties, sport associations and welfare organisations count as NPISHs. The main source for the NPISH calculations are the wage and salary data, which all employers supply to the Tax Agency for every person employed. The data provide complete coverage and include wages and salaries paid and pay-related benefits. To the total of wages and salaries are added social contributions and other taxes on production, which are calculated as a percentage of the total. Intermediate consumption is calculated as fixed proportions per purpose of the sum of wages and salaries, social contributions and other taxes on production. The proportions are obtained from the corresponding activities within general government consumption and apply to 1995. Subsidies comprise subsidies on wages and salaries and are obtained from the calculations of central government subsidies. Sales income consists of sales of various services to households and municipalities. NPISH final consumption expenditure represents 3.5 percent of the total household and NPISH final consumption expenditures.

#### *1.5.1.2 Motivation for significant choice of data sources*

The Household budget statistics (HBS) constitute the only consistent inquiry, which measures household consumption expenditure as such. One of the problems in using other data sources, e.g. turnover, is that it is difficult to show the exact proportion of total sales income accounted for by households. As the HBS is a relatively small sample survey, the HBS material produced is subjected to critical scrutiny. In those cases in which the HBS estimate is not up to the standard of data from other sources and there are sound reasons to place more confidence in other sources instead, the HBS estimate is discarded. Special attention is of course focused on items which are habitually underestimated in HBS inquiries and expenditure which has poor coverage because of the composition of the sample, for example in households with persons aged over 79.

#### *1.5.1.3 Independence in relation to other approaches*

Household consumption expenditure is based on separate calculations for the various purposes. With the aid of comparisons with other material, inquiries and calculations there are in many cases possibilities for checking the plausibility of the household expenditure

calculations produced. In Sweden there are many data in a number of administrative registers coded in the same way, which to a large extent facilitates comparisons.

#### *1.5.1.4 Valuation*

Valuation is based on the purchaser's price, i.e. the price the purchaser pays at the time of purchase in accordance with ESA 3.06. Consumption of goods produced on own account is valued at production cost with a supplement for VAT regarding agriculture products produced by enterprises normally producing for selling. This treatment is based on Swedish VAT legislation. However, consumption of goods produced by households as consumers has no addition for VAT. For used goods sold in the household sector through a third party, only the margin realised on the sale is included. In the case of purchases paid for in instalments, it is the purchase price including all supplements in the form of delivery and installation charges, which makes up the value of the product in question. The interest element is not included in the value. Interest charges are not regarded as household consumption but are treated as a transfer between borrower and lender.

#### *1.5.1.5 Transition from concepts used in private accounting and administrative concepts to ESA 95 national accounts concepts*

In those cases in which the source records expenditure exclusive of VAT, for example the Business statistics, a conversion is carried out in order to obtain the value, which is correct by definition.

#### *1.5.1.6 Use of direct and indirect measurement methods*

Direct measurement methods are used for most expenditure in household consumption. However, indirect methods are applied in order to calculate a utility value for all dwellings other than rented accommodation. Indirect methods are further used to record the utility value of car benefits and of PC benefits and of financial services.

#### *1.5.1.7 Roles of benchmarks and extrapolation*

The calculations for household consumption expenditure are based both on expenditure amounts measured annually and on extrapolations of benchmarks in a certain year with the aid of various indicators. In certain instances extensive reconciliation has been undertaken.

#### *1.5.1.8 Exhaustiveness*

##### *Household budget statistics (HBS)*

Data on household consumption according to the national accounts definitions are not available in a single statistical inquiry. Statistics Sweden has endeavoured to measure household expenditure with definitions as close as possible to those of the national accounts in household budget and household expenditure surveys (Household budget statistics (HBS), Household budget surveys (HBU) and Household expenditure surveys (HUT), which are conducted at different intervals.

For 1995 a sound benchmark was established for household consumption. Comparisons were made of the levels provided by various sources, and the dominant source, which came to be used were the household budget surveys of 1995 and 1996. The HBS material was then grossed up so as to coincide with the national accounts concepts. Annual comparisons with estimates from later HBS from 1999, 2000, 2001, 2003, 2004 and 2005

have also been made. Unfortunately, HBS of later years have not been in compliance with other sources for the household expenditure estimates, but seem to be underestimating most items. The surveyed population does not seem to be large enough to give reliable results.

Therefore the calculations of household consumption are built up with the aid of a number of other sources to a large extent. Information on retail sales from 2002, quarterly turnover statistics, VAT records, administrative records, information from trade organisations and information on sales to households from the SBS are the main other sources used.

#### *Retail trade 2002*

This is a survey in which a detailed breakdown of products sold was made. A matrix showing share of sale for different products by COICOP is built up. It contains in combination with some service surveys the breakdown of 100 COICOP classified item on 70 industries.

#### *Turnover statistics, VAT records, Business statistics*

In order to estimate trends from an initial year forward, in many cases Statistics Sweden's quarterly turnover statistics are used for the retail trade and certain service industries. The trend in the turnover statistics is compared continuously with the trend in turnover obtained when data from VAT declarations are processed statistically. Here adjustments can be made to the turnover statistics if the VAT material is judged to be more reliable. The trend figures from the turnover statistics are also compared on an annual basis with the results obtained when the annual business statistics are processed. Comparisons between, in the first instance, trend figures, but also turnover, are made for those industries which are of interest in this context.

#### *Further reconciliation*

In the annual calculations a wealth of other detailed information, which can be collected for various goods and services is also used. This may involve, for example, records from departments and agencies of government, trade organisations and membership associations or from supervisory bodies, which exercise surveillance, collect charges or pay subsidies in relation to the scope of the activity. Register material, inter alia, for vehicles and real estate, intermittent industry inquiries and research reports from universities as well as studies of various activities are also used.

The Swedish national accounts are based on product-by-product supply and use tables, which mean that all production and use of goods and services is arranged in a system of product balances. This provides an opportunity to check the calculated consumption of goods and services for household consumption and other use against the supply of the corresponding goods and services. If there are differences between supply and use, a residual item arises and special analysis is then devoted to the good or service in question and the required measures are taken in order to bring about a better balance between supply and use.

The calculations for household petroleum consumption are carried out in the national accounts special energy balances. For petroleum products there are statistics from a number of sources, and these are coordinated into five different product balances in which the allocation to different user groups is specified.

Analysis, reconciliation and adjustments thus arise for all of the 249 product groups, which make up the smallest building blocks of household consumption allocated to purposes.

## **1.5.2 General government final consumption expenditure**

### *1.5.2.1 Reference framework*

In the national accounts the general government sector consists of three sub sectors – central government, local government and the social security sector. Central government comprises departments of government administration and other central government agencies, authorities and institutions whose jurisdiction covers the entire economic territory, apart from the administration of the social security sector. It also includes non-profit institutions, which are controlled and chiefly financed by the State. Central government public service undertakings are classified as market producers and are therefore included in the non-financial corporations sector.

The Swedish Export Credits Guarantee Board (EKN) and public law service offices are classified as market producers and are not therefore covered by the calculations for central government final consumption expenditure. The units of the National Road Administration and National Rail Administration for the production of buildings and structures are classified as producers for own final use and are also not covered. All remaining central government authorities and institutions are classified as other non-market producers and are therefore included in the calculation of central government final consumption expenditure.

In 2005 the local government sector comprised 290 primary municipalities, 18 county councils and 2 regions, 103 local federations plus the Swedish Association of Local Authorities, the Federation of Swedish County Councils and non-profit institutions controlled and chiefly financed by local authorities. The Church of Sweden, previously within the local government sector, became an independent non-profit organisation on 1 January 2000.

Local government activity consists of social services such as care for the elderly, child-care and social assistance matters, the public sector school system and education for children, young people and adults, planning and building matters, health and environmental protection, cleansing and waste disposal, emergency services, water supply and sewerage, public order and safety and health, and medical care including dental care. In addition the local authorities pursue activities in the fields of recreation and culture, housing, energy and industry, public transport and tourism promotion.

The output of cleansing and waste disposal, water supply and sewerage, housing and energy is produced by units classified as market producers. Hence these are not included in calculations for the consumption expenditure of primary municipalities.

The social security sector includes units whose main activity consists in administering funded social insurance systems. The social security sector comprises the insurance schemes, National Supplementary Pensions Scheme (ATP). The institutions which administer the various social security systems are the National Pension funds (*AP-fonderna*).

Current lists of institutions forming part of the central government sector are maintained by both the Swedish National Financial Management Authority (ESV) and Statistics Sweden and lists of institutions in the local government and social security sectors are provided by Statistics Sweden.

#### *1.5.2.2 Main data sources*

The *central government* calculations are based mainly on the records of the Swedish National Financial Management Authority (ESV) for the expenditure of departments and agencies of central government by types of expenditure of total activity of central government departments and agencies. The basic documentation for these records is obtained from the government accounting system and therefore covers all expenditure of departments and agencies of government, also those financed otherwise than by way of the national budget. All expenditure is thus classified in the real economic distribution as consumption, investment or transfers and by type of expenditure and purpose.

The main sources for the calculation of the consumption expenditure of *local government*, excluding county councils, are the summary accounts, which are collected annually by Statistics Sweden for primary municipalities and local federations. The form contains around 3500 variables. On 1 January 2000 the Church of Sweden became an independent organisation and from that date onwards has formed part of the sector of non-profit institutions serving households. However, annual information is still collected like before by Statistics Sweden.

For the county council calculations the main source consists of the summary accounts of the county councils, which contain the end-of-year accounts. Data from the various counties/regions are collected and compiled by their own membership organisation, the Federation of Swedish County Councils.

Other sources used for the calculation of local government consumption include the annual reports of the Swedish Association of Local Authorities and Federation of Swedish County Councils, statistics on theatrical and dancing activities from the National Council for Cultural Affairs, employment statistics from Statistics Sweden and material from the National Agency for Education and National Board of Health and Welfare.

The National Supplementary Pensions Scheme (ATP) is managed by the fund administrations of the National Pension Funds. The sources for consumption expenditure are the annual reports of the National Pension Fund administrations and a survey conducted by the National Social Insurance Board at the request of the Swedish Financial Management Authority, the results of which are passed on to Statistics Sweden.

#### *1.5.2.3 Motivation for significant choice of data sources*

The statistical sources for central government, primary municipalities, local federations and county councils provide comprehensive coverage, i.e. all units are included. The sources used are based on the accounting system of the institutional units, which as far as possible is adapted to the requirements of the national accounts. There is continuous development of sources in order to conform to the needs of the national accounts in respect of reliability and level of detail and extended requirements to comply with ESA95.

#### *1.5.2.4 Independence in relation to other approaches*

The expenditure of the general government sector on consumption and investment is based on the accounting of the institutional units for expenditure and income. In the calculation of total consumption expenditure there is a subdivision into the components intermediate consumption, wages and salaries, social contributions, other taxes on production, other subsidies on production, capital consumption, sales, other assets produced on own account and social benefits in kind. Data at current prices are obtained from the respective source.

#### *1.5.2.5 Valuation*

Consumption expenditure consists of the output value for the activity units of general government classified as other non-market producers, minus their sales income plus their purchases from market producers of goods and services, which are supplied to households directly without further processing as social benefits in kind.

- + Military equipment
- + Intermediate consumption including deductible VAT
- + Wages and salaries
- + Social contributions
- + Other taxes on production
- Other subsidies on production
- + Consumption of fixed capital
- = Value of output
- Sales of goods and services
- Production for own final use
- + Social benefits in kind

= General government consumption expenditure

#### *1.5.2.6 Transition from accounting data to national accounts concepts*

The underlying material to calculate general government consumption expenditure is obtained from the total accounting records of the various sub sectors, which are collected by the national accounts. The material is obtained from departments and agencies with widely divergent activities and is arranged in a common accounting system. Through close cooperation with the suppliers of statistics concerned it has been possible to adapt the compilation of records in such a way that the national accounts can separate out data which need to be classified in a different way in the national accounts.

#### *1.5.2.7 Use of direct and indirect measurement methods*

Direct measurement methods are used in the calculations for the general government sector apart for consumption of fixed capital.

#### *1.5.2.8 Roles of benchmarks and extrapolation*

The calculations are based on annual data at current prices and extrapolations are not therefore used.

#### *1.5.2.9 Exhaustiveness*

The underlying material provides complete coverage since data are collected for all activities. A plausibility check of the material is always carried out when it is received by

Statistics Sweden. Comparisons in the form of time-series are also used in order to detect any major divergences between years. The material is also returned to the data suppliers, inter alia in the form of key figures, which facilitate comparisons between different local authorities. The suppliers then have an opportunity to correct their data if they consider that an error has occurred.

### **1.5.3 Gross fixed capital formation**

#### *1.5.3.1 Reference framework and main data sources*

The annual SBS is the main source for market producers and producers for own account. But the quarterly investment survey also constitutes an important source for the breakdown of investments by type. Information on gross fixed capital formation for the central government sector is available from the comprehensive material collected by the Swedish National Financial Management Authority and from the summary accounts for the local government sector.

#### *1.5.3.2 Valuation*

Gross fixed capital formation is valued at purchaser's prices including delivery and installation charges. In those cases in which the market price is not available, for example when it concerns capital assets produced on own account, it has proved necessary to accept the production cost without any supplement for the profit element which would have arisen on a sale. Alternatively capital assets produced on own account can be valued at the basic price applicable at the time of the investment to the type of asset concerned, provided such a basic price is available. The valuation also contains all other costs associated with the acquisition, e.g. customs duties and other taxes on products and costs of transport, architectural services and installation. Non-deductible VAT is included. VAT for the investment of departments and agencies of government are also included in accordance with Commission Decision 1999/622 EEC of 8 September 1999.

For buildings and installations which normally have a production time extending over several periods, the total investment value is split up so that the amount recorded for each period in principle corresponds to the part which is completed during that period. Often, however, as a close approximation, payment instalments made during the period are recorded.

Gross fixed capital formation is entered at the time when ownership of the asset passes from the vendor to the user. In the case of financial leasing the amount is entered when the user – the lessee – takes possession of the asset, despite the fact that it continues to be owned by the lesser during the entire period of the lease. Investment on own account is entered when it is produced.

#### *1.5.3.3 Transition from the concepts used in private accounting and administrative concepts to concepts used in the national accounts in accordance with ESA95*

Swedish legislation allows direct depreciation of so-called 1-2 year investment, i.e. capital assets of limited value with an economic life of less than 3 years. SNA93 and ESA95, on the other hand, treat these as gross fixed capital formation. The areas affected by the distinction between the accounting legislation and the national accounts concepts are, on the one hand, software investment and, on the other hand, investment in machinery and equipment. A special question is introduced in the SBS in order to capture short time investments. Reallocation by the national accounts is carried out so that an amount



corresponding to the value of software investment is recorded as investment and is deducted from intermediate consumption.

For construction investment, estimates are required, which only contains investment in new assets. This information is essential because of the method used for the calculation of output in the construction industry. As regards surveyed big enterprises, the SBS gives all the necessary information. For smaller enterprises, however, further information is collected either by a special annual survey or from the quarterly survey for the breakdown of the administrative SRU-material. The value of new construction investment for each year is calculated as the difference between the closing and opening balance with an addition for recorded depreciations during the period. Also added is the difference between remaining value and sales value as mirrored in the reported capital gains/losses. This latter item is the difference between the book-keeping value and the value according to the national accounts. The sum of this calculation will be the net investment for the period.

#### *1.5.3.4 Use of direct and indirect measurement methods*

Direct information is collected from the sources apart from models for leasing, software, and dwellings. In order to sort out transport equipment from the main group “machinery and transport equipment” in the SBS, information from vehicle and ship registers are used.

#### *1.5.3.5 Roles of benchmarks and extrapolation in the investment calculations for buildings, machinery and transport equipment excluding leasing*

The compilations are based on annual information. Only for a couple of minor items benchmark and extrapolations are used.

#### *1.5.3.6 Exhaustiveness*

Representatives of those concerned with business statistics, investment surveys, national accounts and statistical methodology expertise continuously scrutinise the results and the structure of the inquiries in relation to one another. Questions on over- and under-coverage are dealt with.

### **1.5.4 Changes in inventories**

#### *1.5.4.1 Reference framework*

The inquiry population for most of the industries in the inventory inquiry is obtained from Statistics Sweden’s business register.

#### *1.5.4.2 Main data sources*

The statistics are mainly based on statistics collected directly from enterprises by SCB questionnaires. The inquiries are quarterly and cover mining and manufacturing, distribution and also the service industries. Changes in inventories in the service industries are however based on the SBS information. Data on agriculture are produced by Swedish Board of Agriculture and the forestry statistics are supplied by the Swedish University of Agricultural Sciences (SLU) and the National Board of Forestry. The central government statistics are produced by the Swedish National Financial Management Authority (ESV).

#### *1.5.4.3 Valuation*

The value of the inventories of enterprises is equal to the value of stocks acquired minus the value of stocks disposed of during the calculation period and is measured in the inquiries as the difference between opening and closing inventories. Changes in inventories are converted in such a way that they only give the change in the volume of inventories excluding inventory price gains. Inventories of materials and supplies must be valued at replacement cost and inventories of work-in-progress, finished products and goods for resale at their sale price. If another price is indicated by the enterprises, Statistics Sweden carries out a conversion to establish the correct price level.

#### *1.5.4.4 Use of direct and indirect measurement methods*

Direct measurement methods are used for changes in inventories.

#### *1.5.4.5 Exhaustiveness*

In the process of balancing between supply and use, there may be a need for adjustments to changes in inventories. The material collected is balanced, and any deficiencies in the main quarterly source are adjusted primarily in conjunction with the balance reconciliation.

### **1.5.5 Exports and imports of goods and services**

Data on exports and imports of goods and services are specified in accordance with the product classification used in the product accounting system and are compiled at the same level of detail in the quarterly and annual calculations.

Statistics Sweden, which is responsible for the statistics on international trade in goods, collects data on Intrastat (trade with other EU countries) and compiles these with Swedish Customs data on Extrastat (trade with non-EU countries). As of 2003 Statistics Sweden collects also information on foreign trade in services. The main part of this information in a quarterly survey. Since 1 September 2007 Statistics Sweden also produces the Balance of Payments on commission for the Central Bank

Collected data on trade in services is mainly in accordance with the standard drawn up jointly by the OECD and Eurostat for statistics on international trade in services. The Data need to be converted to some extent to the product classification used in the national accounts.

## **1.6 The balancing procedure and main approaches to validation**

### **1.6.1 Role of supply and use tables**

GDP and GNI are calculated and compiled in that part of the national accounts system known as the product accounts. The annual calculation is performed and balanced in a system of supply and use tables. The supply and use tables (SUT) are the basic tables which can subsequently be further processed to Input-Output tables. The table system also includes employment calculations with the average numbers of employees and hours worked per industry/purpose.

The degree of detail in the Swedish system is such that the output calculations are performed on around 400 product groups and 134 industries; household consumption expenditure is recorded for 147 purposes in accordance with COICOP; consumption expenditure of departments and agencies of government is allocated to sectors, industries and functions (COFOG), which makes 58 uses. Gross fixed capital formation is broken down by sector, industry and function (COFOG), split on 128 uses in the economy.

The calculations and balancing in SUTs mainly affects products from market output and production for own final use, and sales by other non-market producers (departments and agencies of government and non-profit institutions serving households). They also include value added components and employment for market producers and producers for own final use. The value added components for other non-market producers, which do not affect the balancing, are added at a somewhat later stage.

### **1.6.2 Other strategies applied in the validation of GDP**

#### *1.6.2.1 Labour input, productivity trends, trends in earnings*

Labour input calculations form an integral part of the national accounts. Data are calculated mainly using the same industry classification as the output calculations. The calculations apply to the average number of persons employed and hours worked, with a breakdown by employers and employees. The national accounts may also obtain data from private firms for a better interpretation of the statistics. These data are combined with data on production, intermediate consumption, value added, wages and salaries etc., and the industry-by-industry analysis is supplemented by an analysis of industry-by-industry labour productivity trends and trends in earnings. The analysis may result in adjustments to any of the input variables

#### *1.6.2.2 Sector accounts*

The Swedish national accounts are complete in the sense that they comprise both product accounts (PA) and sector accounts (SA). The product accounts take precedence over the sector accounts in the calculation procedure, but the calculation of a year is not completed until both the PA and SA are finalised. The calculation of the institutional sectors is not entirely separate from the PA calculation. Total income is determined from GDP. This means that the trend in incomes and their allocation to sectors are an interesting variable of analysis, as also the distribution of net lending by sectors.

## **1.7 Overview of the adjustments for exhaustiveness**

The main approach in the calculations is somewhat geared to the expenditure side. Through careful evaluation of household consumption expenditure, comprehensive statistics on general government consumption and well constructed inquiries on investment, inventories and foreign trade it should be possible to optimise the estimation of expenditure.

Quarterly inventory surveys have been produced for industry and distribution since the 1960s and, in 2001, were supplemented by an inquiry of inventories in the service industries. Annual data for services is obtained from the Business statistics.

The calculations from the production and expenditure sides are balanced with the aid of annual supply and use tables. The supply and use tables are produced simultaneously at current and constant prices, and the constant price calculation is performed in a consistent price index system. Analysis of the trend in constant prices can thus affect the current price balancing.

### **1.7.1 The production approach**

The sources for the output calculations consist of censuses in the great majority of cases. Major enterprises are surveyed by questionnaire, whereas data for all other enterprises are obtained from administrative material supplemented by surveys for information on a detailed level. Adjustments are made for differences between accounting rules and the definitions applied in the national accounts.

Explicit supplements for the output value of unrecorded activity have been included for a number of industries. The estimates are mainly based on an audit study by the Swedish Tax Agency in 2006. Estimates for illegal activities on drugs, alcohol, tobacco, gambling and prostitution are also included in the compilations.

### **1.7.2 The income approach**

The income approach in the present structure for the economy as a whole has the completeness determined by GDP in the compilation from output and expenditure side. That proportion of incomes consisting of wages and salaries includes income in kind in accordance with the rules laid down by the tax authorities. In addition a special supplement is applied covering car benefits for the years 1997 onwards, where the utility value is deemed to exceed the levels laid down. Gratuities are taxable income and must be declared as wages and salaries; they are recorded as the actual amounts received. Adjustment for those cases in which amounts are not recorded is included in a supplement for undeclared wages and mixed income.

### **1.7.3 The expenditure approach**

Household consumption expenditure is based on a large number of sources, which are checked and tested for consistency. Level estimates, obtained from the household budget surveys are carefully compared with information from other sources and adjusted on a

number of points. An important source for comparisons are the retail trade turnover statistics distributed by industries, in which turnover is allocated to different types of goods through special questions in the SBS and special information on food sales.

General government consumption and investment are calculated from comprehensive statistical sources structured so as to meet the requirements of the national accounts, which amongst other things means that all general government activity is included. Supplements are applied in order to cover definitional differences between public sector accounting and national accounting, such as those affecting software, short-term investment and financial leasing.

Data on investments by activity are collected mainly by means of two inquiries, the annual structural business statistics and the investment surveys, which provide quarterly information. The SBS from 2004 and onwards also contains information on short-term investment.

## **1.8 Transition from GDP to GNI**

The data on GNI are obtained by adding data on primary income to the data on GDP. Information on the different items is collected either in the quarterly survey on external trade in services or by special monthly and quarterly surveys. The main items constitute property income. The relevant parts of the data on transfers, which are contained in the primary income concept, i.e. Sweden's contributions to the EU and contributions from the EU, are consistent with the data compiled by the Swedish National Financial Management Authority (ESV).

### **1.8.1 Compensation of employees**

The data are obtained through the quarterly survey on external trade in services. This means that not only wages and salaries earned in another country during a stay of not more than one year are covered, but also other wage and salary transactions arising directly between an employer and his employees. This divergence with respect to ESA, however, is considered to be of minor significance in practice.

Wages and salaries earned in one country and repatriated to the home country are not included here but are treated as miscellaneous current transfers.

### **1.8.2 Taxes on production and imports**

Data on taxes only arise on the outflow side. These relate to customs duties, VAT, agricultural levies and sugar levies, which constitute parts of Sweden's contribution to the EU and are recorded as transactions affecting taxes on production and imports. However, the GNI levy, which also forms part of Sweden's contribution to the EU, is recorded instead as a current transfer. The national accounts receive the data from the ESV.

### **1.8.3 Subsidies**

The data on subsidies apply both to subsidies on products and to other subsidies on production from the EU and thus only affect the inflow side. It is mainly a case of subsidies to agriculture. These data are obtained from the ESV.

### **1.8.4 Interest**

Returns on financial assets and debts also include interest. Since the data in the balance of payments statistics on financial returns are structured according to the main headings in the financial balance, three types of interest income and expenditure are distinguished.

Interest expenditure is recorded on an accruals basis as regards bonds and money market instruments. Recording on an accruals basis here means that the interest is entered as income in the company's accounts. This applies in the main also to other interest flows, but only from the fourth quarter of 1997. The Swedish Central Bank adapted the statistics to BPM5 and Eurostat's implementation of the IMF recommendations at that time. The estimates have been back-casted to 1992 on an aggregate level.

### **1.8.5 Income from corporations – revenue from shares and equity capital**

The revenue concept, in addition to interest, also covers dividends on shares in portfolio investments as well as dividends taken and reinvested profits from direct investments.

Returns on portfolio shares comprise dividends on holdings amounting to less than 10 per cent of the equity or voting rights. The distribution is recorded on an accrual basis. The data are obtained partly from direct reporting and partly on a calculation model.

Dividends on shares in direct investment enterprises are recorded partly in respect of the date of payment and partly when the dividends are payable. "Direct investment enterprise" refers to an investment under which a person, usually an enterprise, directly or indirectly acquires a holding of 10 per cent or more in an enterprise in another country. Information is collected by an annual sample survey.

### **1.8.6 Reinvested earnings on foreign direct investment to/from ROW**

Reinvested earnings are that part of the profits of a direct investment enterprise, which are not distributed to the shareholders but are retained in the company. These earnings are calculated as the difference between the total profit of the enterprise after tax and the distributed profit. Whereas dividends are recorded on the date of payment, reinvested earnings are imputed to the income year in which the earnings arose.

## **1.9 The exclusion of the effect of the allocation of FISIM on GNI**

The FISIM calculations are regulated in Council Regulation (EEC) no. 448/98 of 16 February 1998 and council regulation (EC) No 1889/2002. The former defines the FISIM calculations of production and expenditure by institutional sector and the latter implements them.

The statistical units that are covered in the FISIM calculations are all financial institutions engaged in financial intermediation of loans and/or deposits where the rate of interest is controlled by that very unit. The main financial institution that produces FISIM is banks. During 2005 the banks accounted for approximately 60 percent of total FISIM in Sweden.

The calculation of FISIM is based on the reference rate method. The reference rate is presumed to represent the cost of borrowing, apart from any risk premium or intermediation service. The *internal* reference rate is based on inter bank rates, which is given by the ratio of interest receivable on loans and stocks of loans between the financial institutions engaging in financial intermediation:

Interest receivable on loans between resident financial intermediaries (s122,123)

Stocks of loans between resident financial intermediaries (s122,123)

When calculating import and exports of FISIM the appropriate method is to apply the *external* reference. The external reference rate is based on the ratio of interest received on loans from non-resident credit institutions plus interest paid on deposits to non-resident credit institutions and the equivalent stock of loans. In Sweden, however, the results of these calculations are volatile, which has led to a different approach than outlined in Council Regulation (EEC) no. 448/98.

The interest rate that banks and other financial intermediaries pay/receive is the reference rate including or excluding an indirect service charge depending on whether it is a deposit or a loan. FISIM is estimated as the difference between the reference rate and interest paid/received on deposits/loans:

FISIM on deposits (deposits \* internal reference rate – interest paid on deposits)  
 + FISIM on loans (interest receivable on loans – loans \* internal reference rate)

FISIM is allocated to user sectors/industries as intermediate consumption, final consumption or exports.

## **Chapter 2 Revisions policy and timetable for revising and finalising the calculations**

### **2.1 Revisions policy**

Revisions, in other words altered data relating to a period, which has already been published, are a natural part of the national accounts work. They arise for several reasons.

- a. There is a strong interest among users in having access to national accounts very soon after the close of the reporting period. A consequence of this is that the first accounts must be based on preliminary data and therefore need to be revised as and when more final material becomes available.
- b. An important characteristic of the national accounts is that the quality of time-series must be maintained. Discontinuities in time-series are unacceptable. This means that reorganisations of the statistical source material following the addition of new statistics, which give rise to new statistical benchmarks, impose the need for revisions of the national accounts.
- c. Parts of the accounts can be based on benchmarks set at various intervals, usually every five to ten years. The calculations are undertaken pending the setting of new benchmarks with the aid of extrapolation using indicators. When a new benchmark is calculated, the need may arise to revise intervening periods.
- d. The methods used in the calculation of the national accounts undergo development and change over time. Methodology changes are generally introduced in conjunction with the incorporation of revised data into the accounts. Methodology changes may themselves also give rise to revisions to some extent (e.g. better balancing methods).
- e. ESA95 is implemented in the EU Member States. However, it is not always obvious how ESA is to be interpreted in all respects. Interpretation recommendations are produced as part of international cooperation which, if they do not coincide with the interpretation first adopted, may impose the need for revisions.

In Sweden a relatively strict policy on when revisions can be carried out is applied as regards current revisions, i.e. revisions that are due to more final statistical material becoming available (point a. above).

There is no such clear policy as regards the timing of other revisions (b.-e.).

For a number of reasons it is desirable to make several different revisions at the same time. This is clearly preferable from a resources point of view. Revisions always involve extra work: the more years have to be revised, the more work there is. From the users' point of view the position is less clear-cut: there may be an interest in having the revised data incorporated as soon as possible, but there is also a strong interest in having time-series remain in place for some years and not be constantly subjected to major or minor adjustments.



### 2.1.1 Current revisions

The first compilation of the national accounts for a given year is published no later than 60 days after the close of the year. The calculation is based on preliminary statistical material. The product accounts (GDP from the production and expenditure sides) are produced by a quarterly method, to a certain extent based on quarterly or monthly statistics, and the data for the whole year are the sum of four quarters. At this time sector accounts are also calculated and published for the main institutional sectors for the first time relating to the year immediately before.

Data relating to the year may be revised at the publication of the first quarter of the next year but are normally not revised to a large extent before production of the *preliminary annual calculation*, which is published after 11 months. The preliminary annual calculation is based on more complete incoming data, but fully finalised data sets are not available until after a further period.

The next time data are revised is in conjunction with the final annual calculation, which is published after 23 months. By then all available data have been incorporated and balanced in the system of supply and use tables. After that a year is normally not revised other than in conjunction with major revisions.

### 2.1.2 Major revisions

Major revisions may arise for a number of reasons: new sources, new methods or classifications, amended procedures for the application of ESA and the like. Such revisions relate to a longer period and are generally undertaken at less frequent intervals. There has never been any strict timetable for such revisions, in the sense that they are to be undertaken at certain specified intervals. During the 1980s and 1990s some major revisions were undertaken at relatively long intervals, as well as some revisions covering a longer period but more limited in scope. Often the publication of the revisions coincided with base-year changes.

The implementation of SNA93/ESA95 was a major revision undertaken by the Swedish national accounts, and was published in May 1999. As well as adaptation to new international standards, this also involved changes in classifications, a major review of calculation methods and the incorporation of new data. The new accounts have been produced on the most detailed level from 1993 onwards.

This was followed by a new revision, which was published in December 1999 and covered the entire period from 1993. This revision stemmed from the fact that an important data source, the balance of payments statistics, a few months previously had published major revisions in the data on exports and imports of services. Certain revisions have also been introduced since then.

The introduction of the comprehensive Structural Business Statistics made necessary another major revision published in 2002 covering the years 1993 and onwards.

In accordance with decisions by Eurostat, the EU's statistical office, Statistics Sweden had to change the treatment of value added tax in the government sector and also had to

change institutional sector for the premium pension system. Regarding VAT, it was not allowed to follow the Swedish taxation rules, allowing tax reduction for certain government activities. All transaction has to be recorded gross, inclusive of VAT.

The premium pension system is a defined contribution and funded system administrated by the Premium Pension Authority, PPM. Such a pension system should not be reported as a part of the public sector when reporting the general government sector deficit to Eurostat. PPM should instead be considered a publicly-owned insurance company that has a premium pension liability regarding households. The changed treatment had impact on the accounts from 1995 and onwards.

In 2005 all member countries were supposed to allocate Financial Services Indirectly Measured, FISIM, to the respective users. Before, uses of these services were withdrawn in a lump sum from market producers and producers for own account.

During 2007 a major revision has been carried out. The work in 2007 has taken into account the following updates:

- A new extended structural business statistics, SBS
- A changed method for collecting foreign trade of services
- A changed valuation method for export and import values
- A new method for compiling public non-market production in constant prices
- A new estimate for hidden economy and introduction of illegal activities
- A general update of miscellaneous items

The revision has been performed at the most detailed level for both annual and quarterly estimates. Benchmarking years for the new estimates are 2003-2004. A great deal of new material was available for this period. The period 2000-2002 has been treated in the same way but on the basis of a less substantial material. Every year from 2000 and onwards has been treated in the supply and use tables and consolidated both in current and constant prices at product level. New information for the period before 2000 was scarce. This also follows from the fact that the previous revision in 2002 included the years before 2000. The 90-ies have not this time been back-casted at the most detailed level with annual supply and use tables.

The main aggregates have been back-casted till 1950 and some others till 1980 by use of a simple quoting method. During 2009 more material covering the period before 1993 will be published.

**Table 5 Revisions of annual data 1999 and onwards**

May 1999	NA according to ESA95 published for first time	Revisions relating to
	Complete annual accounts 1993-1996	1993-1998
Dec. 1999	Revisions to the BoP statistics. No complete annual accounts for 1997 because of SBS delays	1993-1998
Nov. 2000	Detailed annual calculations 1997-1998. Preliminary annual calculation 1999	
March 2001	Amended treatment of interest swaps	1993-2000
Nov. 2001	Detailed annual calculation 1999 Preliminary annual calculation 2000	
Dec. 2001	Introduction of new COFOG	1993-1999
Dec. 2002	Introduction of comprehensive SBS Changed VAT-treatment govt sector Detailed annual calculation 2000 Preliminary annual calculation 2001	1993-2000 1993ff
Nov. 2003	Detailed annual calculation 2001 Preliminary annual calculation 2002	
Nov. 2004	Revised labour input Detailed annual calculation 2002 Preliminary annual calculation 2003	1993ff
Nov. 2005	Allocation of FISIM Detailed annual calculation 2003 Preliminary annual calculation 2004	1993ff
Nov. 2006	Detailed annual calculation 2004 Preliminary annual calculation 2005	
Nov. 2007	Major revision Detailed annual calculation 2005 Preliminary annual calculation 2006	1993ff

## 2.2 Timetable for revising and finalising the accounts

### 2.2.1 Quarterly accounts

The Swedish national accounts comprise both annual and quarterly accounts. The annual and quarterly accounts are fully integrated, so that the quarterly accounts are completely adjusted to annual data when these are available.

The first compilation of the national accounts for a given year is published, as already noted, no more than 60 days after the close of the year. The calculation is then based mainly on preliminary statistical material. The product accounts (GDP from the output

and use sides) are produced by the quarterly method, although certain data for the whole year are then available and are used. Data for the whole year result from the sum of four quarters. At this point the sector accounts are also calculated and published for the first time in respect of the year immediately before.

From 2004 and onwards the quarterly accounts are also balanced in supply and use tables, although at a more aggregated level, 70 product groups, than the annual accounts.

### **2.2.2 The annual accounts**

To a certain extent the work on the annual accounts gets under way in the spring but is carried on at its greatest intensity from August, for publication in November. That is when the preliminary annual accounts for year (t-1) and the final accounts for year (t-2) are published.

The final accounts are based on complete and detailed primary statistics. Processing, as regards the product accounts, takes place in a detailed system of supply and use tables. The annual accounts also include non-financial sector accounts, with accounts for primary and secondary income distribution, use of income and capital formation and savings for institutional sectors. Included are also financial sector accounts, showing transactions in financial assets and liabilities between institutional sectors as well as savings. There is a difference in the estimate of financial savings between the two approaches. However, work is under way in order to make sources and compilation methods more transparent aiming at reducing the differences.

The statistical material normally used for the annual accounts is incorporated into the preliminary annual accounts in so far as the material is available at the time of calculation.

Data which are broadly speaking final for general government output and consumption are available on production of the preliminary annual calculations. For investment too, as well as for exports and imports, updated and partially new material is available. For some years, however, no data have been available from the structural business statistics that could be used in the preliminary annual calculations. This is because the administrative input from the Swedish Tax Agency, which is used for data on enterprises, is received too late to be processed for the preliminary annual accounts in the present timetable.

### **2.2.3 Longer time series**

For the period 1950 to 1992 there are for the moment national accounts data on a much aggregated level. Normally, the calculations are performed in such a way that adjustments for important conceptual changes are effected separately. The consequences of benchmark changes introduced into the accounts because of access to better statistics are remedied by the use of previous volume and implicit price index change figures.

The entire time-series is chained to a common reference year of 2000. This means that over time there are aggregated national accounts series at current prices and at 2000 reference prices for the period 1950 and onwards.

Quarterly data are available for the period 1980 and onwards. Back-casting on a more detailed level will be performed during 2009.

#### 2.2.4 Publication

The national accounts are published in conjunction with each quarterly calculation on Statistics Sweden's homepage and in Statistics Sweden's statistical databases. The press release is published separately. Every quarter *BNP-kvartal* (GDP quarter), a tabular publication in paper format, is also distributed to interested users.

Annual national accounts are published in the SM (*Statistiska Meddelanden* – statistical bulletins) national accounts series. The Annual SM also contains notes to the tables and explanatory text. The Annual SM is now also presented on Statistics Sweden's homepage.

The national accounts data are also published in Statistics Sweden's *Statistisk årsbok* (Statistical Yearbook) and *Nordisk statistisk årsbok* (Nordic Statistical Yearbook), in publications of the OECD, Eurostat, the UN, and the IMF; in the documentation series *Konjunkturläget* (Economic situation) of the National Institute of Economic Research (KI); and in the finance plan of the Ministry of Finance.

## Chapter 3 The production approach

### 3.0 Output from market producers and producers for own final use

Chapter 3 describes the calculations for both producers for the market and producers for their own final use. The term ‘market producers and producers for own final use’ also includes public service corporations of central and local government. The category ‘producers for own final use’ comprises investment in roads and railways by the National Road Administration and the National Rail Administration, housing services in owner-occupied dwellings and local government building investment.

*The output calculations for other non-market producers are described in chapter 5.*

**Table 6 The output values, intermediate consumption and value added in 2005 of producers for the market and producers for their own final use, billion SEK.**

SNI (NACE) industry	Output value	Interm. Cons.	Value added
01 Agriculture	38977	27016	11961
02 Forestry	21016	7366	13650
05 Fishing	1364	775	589
10-14 Mining and quarrying	22484	10790	11694
15-37 Manufacturing	1612211	1142186	470025
40-41 Electricity, gas and water supply	111688	41581	70107
45 Construction	221558	112553	109005
50-52 Trade and repair services	421528	154123	267405
55 Hotels and restaurants	82406	47027	35379
60-64 Transport, storage and communication	474929	312316	162613
65-67 Financial intermediation	157234	50658	106576
70-74 Real estate, renting and business activities	899124	410411	488713
80 Education	25397	9916	15481
85 Health and social work	71168	21942	49226
90-93 Oth.community, social, personal service act.	110248	62297	47951
95 Private households with employed persons	697	0	697
GVA market prod. & prod. for own final use	4272029	2410957	1861072

The following table is an overview of which sources and compilation models that are used for the total estimates of the production side. In contrast to the table above the figures below include both market and non-market production. The second part of the table shows the continued treatment of the estimates with a grouping into what specific adjustments that are made in order to reach the final estimate of gross value added for the whole economy. Details on sources and adjustments are shown in paragraphs 3.7 - 3.22 of the respective industries.

**Table 7 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH						Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	Benchmark	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M		
				Extrapolatio and models				Total Extrap +Models		
Output	634914	323989	3085441	0	317097	320828	86277	724279	256535	5025081
IC	176656	134701	2026791	766	149328	73945	174545	398585	37230	2771936
GVA	458258	189288	1058650	-766	167769	246883	-88268	325695	219305	2253145

		Adjustments	Conceptual	cut-off	Exhaust.	Balancing	Final
		Data validation					estimate
	Total						
Output	5025081	-33601	31534	0	63604	22	5086640
IC	2771936	-13667	-47951	0	-19816	9397	2698478
GVA	2253145	-19934	79485	0	83420	-9375	2388162

## 3.1 Reference framework

### 3.1.1 Business database, FDB

#### *General*

FDB is a comprehensive register in which all enterprises in the country are covered and maintains a very high standard of quality.

All statistics intended to provide information on the Swedish economy, whatever level – business establishments, enterprises, local unit or corporate groups – they may focus on, presuppose a common set of definitions for subjects of inquiry, industries, measures of size, ownership categories and other recording variables. This in turn requires the existence of registers, which describe links between the units establishments, enterprises, local units and groups and the status of the various units at different points in time. Such a register must constitute the framework for all economic statistics. These basic coordination requirements are met by the use of Statistics Sweden’s business register “Företagsdatabasen”, FDB.

Under a decision of Parliament, it has been the responsibility of Statistics Sweden (Statistiska Centralbyrån, SCB) since 1963 to maintain a business register. This covers enterprises, departments and agencies of government, organisations and their establishments. Each enterprise has a unique corporate identification number and each establishment has a unique establishment number, which makes it possible to computerise the information and to establish links between different bodies of statistical data. The information is protected by secrecy provisions.

#### *Collection of information*

The guiding principle in the collection of data for the register is, in the first instance, to use data that have been supplied for other purposes and to make things as simple as possible for businesses in making their returns. The intention is that businesses should supply one set of data once and to one place.

The updating process can be described in a somewhat simplified form in two complementary stages. One consists of notifications, i.e. the data on changes, which are received every week from the Swedish Tax Agency (Skatteverket, SKV). These are derived from different registers, which are kept, arranged by subject registration, for different tax documents. The information from the SKV updates the data on all enterprises/legal units and establishments/local units belonging to those enterprises, which only have one establishment/local unit. The data on enterprises/legal units with at least ten employees are investigated if there is conflicting information. Apart from continuous notifications, the SKV also supplies income statements for those enterprises/legal units, which are employers (see the section on the calculation of employee compensation.). The

income statements are used in the calculation of numbers of employees for both enterprises, local units, kind of activity units and business establishments.

The other stage covers a range of different activities. The information on enterprises with several establishments/local units is updated annually with the aid of a survey carried out by Statistics Sweden. The survey is carried out in conjunction with the establishment's/local unit's number replacement undertaken in order that each income statement can be assigned to an establishment/local unit. The main intention of the survey is to check the establishment population. A number of verifications are carried out, which may have to do with the occurrence of conflicting information, for example in conjunction with major reorganisations. Data are also obtained through feedback from both users within Statistics Sweden and external users and through spontaneous contacts from enterprises. Information on current changes is obtained from the address-change system, Svensk Adressändring AB, SVAAB. The FDB database is continuously amended so that it is as up-to-date as possible at all times.

#### *Annual frames*

FDB is a situation register in which circumstances at a particular point in time are described. From a statistical point of view, however, it is more relevant that the register should describe the circumstances during different periods, since the statistics have to convey a picture for a certain time-span, for example a month, a quarter or a year. Hence information on changes is also stored and documented in FDB. As the changes are declared in relation to time, it is possible to follow enterprise and establishment populations to be studied and update the sample frames and the samples at any time for changes which have occurred and are relevant to the period to be elucidated.

An annual frame (ångångsram, Å-ram) contains an annual population with classifications correct for the reference year, i.e. qualitatively good material which can be subsequently developed for a calendar year on the basis of different registers and statistical inquiries. The SBS is built on such annual frameworks.

#### *Definition of enterprise and establishments in FDB*

FDB comprises all "active enterprises". The term 'active enterprise' refers to an institutional unit in the form of a legal or natural person or the estate of a deceased person engaging in some form of business activity. The practical demarcations used for these units are:

- \* All legal persons (excluding deceased persons' estates)
- \* Natural persons who meet at least one of the following criteria:
  - \*\* they are registered for VAT
  - \*\* they are registered as employers
  - \*\* they are registered for capital tax
  - \*\* they have registered a firm
- \* Estates of deceased persons which are registered for VAT and/or are registered as employers

The term 'establishment' means each address, property or group of adjacent properties in which the enterprise pursues its activity. All active enterprises in FDB have a least one establishment. In the case of enterprises with geographically separate units, each unit is registered as a separate establishment. Enterprises which are self-contained within a



particular area (e.g. enclosed by a perimeter fence or housed within adjoining buildings) and which consist of several units are normally registered as one establishment. In those cases in which a locally delimited establishment is divided up into functionally delimited establishments, this will have taken place after agreement between Statistics Sweden and the enterprise.

In FDB the number of employees is recorded as the single size-descriptive variable for the establishment. For certain types of establishment, however, special criteria are used for the establishment to be counted as such. Examples of this are power stations and cement works, which are of great economic significance.

Special circumstances arise for public administrations, in that several establishments may exist at the same address.

#### *Reorganization*

In the year 2000, FDB was reorganised and divided up into two different parts, FDB-R, which contains legal units and establishments, and FDB-S which constitutes the statistical register. Here enterprises are grouped according to the following statistical units: business unit, kind-of-activity unit and local kind-of-activity unit (KAU). Data capture is the same as before.

### **3.1.2 Sources**

With effect from 1997, the main source for the output calculations has been Företagsstatistiken/Företagens Ekonomi, FEK. By that time, Sweden also adapted its statistics to the EU Regulation on Structural Business Statistics, SBS, but the statistics are considerably more comprehensive than is required by the Regulation.

Before 1997 business statistics only covered the corporations sector and were called financial statistics for enterprises. Apart from the enterprise statistics, several other inquiries were used to verify and supplement information. Today only postal and telecommunications services are covered also by separate inquiries.

From 2003 and onwards the earlier separate intermittent surveys are included in the SBS. A special model has also been developed for compiling the trade margins of different industries. The difference between book keeping rules and NA accounts definitions have been studied in detail. All variables collected are considered from these points of view. Agreements have been reached on how to treat each variable in accordance with national accounts needs. Specific questions were introduced for various industries in order to collect diversified information depending on the activity in question. To sum up, the material now delivered from the collection unit is much more prepared for the needs of the NA. Statistics Sweden now also has a company profiling group, which is responsible for contacts with the largest companies. The group is also in charge of comparing - and questioning - information delivered in different surveys and registers.

For the industries agriculture and forestry, sources other than SBS are used. These sources are described under the respective industry headings. For SNI 40 –41 Electricity, gas, and heat production, water collection and purification, the SBS are used, but energy statistics also play an important role here. SNI 45 Construction industry is calculated from the

expenditure side as the sum of investment and repairs to buildings and structures. See section 3.12. For SNI 50-99, which covers the service industries, SBS is the main source but, for SNI 62 Air transport, apart from SBS also detailed special statistics are used, and for SNI 65-67, Financial activity, the main source is provided by financial market statistics.

For the minerals extraction and processing industries, SNI 10-37, the present sources are the SBS and the production of industrial goods statistics (Industrins Varuproduktion, IVP). The IVP data are quality checked and verified by comparison of the total level with the SBS.

In SBS all large enterprises (about 540) are surveyed by questionnaire at KAU level. Information on all the other enterprises is collected by way of the administrative material from the Swedish Tax Agency, SRU.

Manufacturing Industry is surveyed by KAUs, while service industries are mainly surveyed at enterprise level. Service industries are supplemented in the enterprise statistics by KAUs in industrial enterprises, which are classified as service units and are reduced by KAUs in service enterprises which are classified as industrial units.

### **3.2 Valuation**

Output is valued at the basic price, i.e. the price received by the producer excluding all product taxes and including product subsidies. This price is also the price, which is collected in the primary statistics. For the construction industry, whose output value is determined as the sum of building investment and repairs, VAT must be removed for those industries in which VAT is not deductible. The figures are produced by calculating VAT separately in the investment and repair calculations for those industries in which VAT is not deductible.

Output for own final use is valued at basic prices of similar products that are sold on the market. Own account construction work however, has to be valued by the help of the costs of production.

Intermediate consumption is valued at purchasers' prices, i.e. the price paid for the products by the enterprise excluding deductible VAT. This valuation also coincides with the valuation obtained in the primary statistics.

Value added is obtained residually and is then correctly valued at the basic price.

### **3.3 Transition from private accounting and administrative concepts to ESA 95 concepts**

With the adaptation to the SBS regulation, production and intermediate consumption is determined with the aid of statistics, which is not completely adapted to the definitions of the national accounts, so that some adjustments need to be made to the statistical value. The statistical sources are on the basis of company accounting principles, which

necessitates a number of corrections to recorded values in order to obtain estimates complying with ESA 95. An intensive work has been laid down between the processors of the SBS and the national accounts personnel. All the items registered in the SBS are discussed and decided upon how to be handled in the material that is forwarded to the national accounts.

### 3.3.1 Value of output

When calculating output, changes in stocks, own-account production and other operating income are added to net turnover. Capital gains, contributions, rental income, insurance compensation are items that are not included in output. The following list is set up for variables to be included or not in output.

<b>PRODUCTION VALUE</b>	
<b>Variable name</b>	<b>Sign</b>
Total net turnover (at VE level)	+
Lease income (Total net turnover, v0103)	-
Received grants (Total net turnover, v0103)	-
Exchange rate profits on receivables and liabilities relating to operations (Total net turnover,	-
Profit by realisation of tangible and intangible fixed assets (Total net turnover, v0103)	-
Recovered customer losses (Total net turnover, v0103)	-
Insurance compensation (Total net turnover, v0103)	-
Strike pay (Total net turnover, v0103)	-
Total net turnover: account income in mail order houses (part of 0103: net turnover excluding	-
Remaining net turnover that is NOT production	-
Change of stock and ongoing work (at VE level)	+
Activated work for one's own account (at VE level)	+
Other operating income (at VE level)	+
Received/refunded shareholders' contribution (Other operating income, v0116)	-
Received group contribution (Other operating income, v0116)	-
Share in profits in partnerships and limited partnerships (Other operating income, v0116)	-
Profit from sale of shares (Other operating income, v0116)	-
Recovered bad debt loss (Other operating income, v0116)	-
Lease income (Other operating income, v0116)	-
Insurance compensation (Other operating income, v0116)	-
Strike pay (Other operating income, v0116)	-
Lease income	-
Received grants (NOT included in production value)	-
Exchange rate profits from receivables and liabilities of operational character	-
Employment support, investment grants	-
Trading goods (on VE level)	+
Costs for travel via agencies	+

In addition a few items are corrected by the compilers at the national accounts. These items are compiled according to special models and consist of:

Extra benefit value of company car and for PC

Own-account software  
Special exhaustiveness items  
Net compilation of taxi centrals

*Benefits.* For access to a free car, including fuel, a supplement to output (car hire) and income corresponding to the utility value of the car benefit was introduced in the national accounts. Up to the end of income year 1996, the fiscal value of the benefit was deemed to correspond to the utility value. The value of the car benefit broken down by sector and industry is obtained from the income statement statistics (KU), see section 4.7.1. The calculation of the fiscal value of the car benefit, however, was changed by political decisions several times during the 1990s. The latest change was introduced with effect from 1997. The benefit value for a completely free car was reduced in 1997 theoretically by 32-35 per cent relative to 1996. The variation is based on the assumed price of the new car. Earlier changes had a marginal effect on the value of the benefit and hence did not lead to any change in the assessment of the correspondence between the benefit value and the utility value. The change introduced in 1997, on the other hand, was more radical, hence the benefit value was recalculated in order to provide a better match with the utility value.

This readjustment of the benefit value was taken into account in the calculation of the output value, so that the value of the actual benefit would not be underestimated. The readjustment factor of 1.25 (+25%) is calculated on the basis of the change in the fiscal assessment of the benefit value between 1996 and 1997, which means that it can be applied directly to the benefit value shown in the income statement data as of 1997. In the calculation of the readjustment factor, account was also taken of other changes between 1996 and 1997 which affect the total benefit level, for example the number of benefit recipients, new car prices and the average replacement value of the car constituting the benefit.

In order to present a true picture of output in sectors and industries, the readjustment of the benefit value was undertaken in each sector on a detailed industry basis. The total estimated output value (benefit value including fuel) for 1997 is SEK 7 163m, of which SEK 1227m is added for the fiscal underestimation of the utility value. The car benefit value for 1996 is SEK 7 675m.

*Software produced on own account.* A special calculation model is devised for the recording of software produced on own account. The model covers all parts of the economy and involves supplements for software produced on own account to the output values reported by enterprises. See also section 5.11.2

### **3.3.2 Intermediate consumption**

Included in intermediate consumption are purchases of goods and services for use in the production process, operational leasing, and costs for staff education, healthcare and recreation. Items like real estate taxes, rental costs, insurance premiums, currency exchange losses, materials with a life time of more than one year recorded as intermediate consumption and charges for financial leasing are withdrawn from the business accounts. Most adjustments in order to comply with the ESA definitions are made in connection with the processing of the SBS material before it reaches the national accounts. The calculation is carried out on the following basis:

INTERMEDIATE CONSUMPTION VALUE	
Variable name	Sign
Raw materials (at VE level)	+
Other external costs (at VE level)	+
Operating costs that are not consumption (of which to v3999, other external)	-
Loss of short-term receivables	-
Other consumption inventories with a lifespan of more than one year	-
Costs for travel via agencies	-
Site/ground leasehold fees/lease fees	-
Other staff costs (at VE level)	+
Severance pay	-
Received grants and compensation for personnel	-

Intermediate consumption is exclusive of the purchase of goods for resale.

A few items are also corrected by the compilers at the national accounts. These items are:

Insurance services

Purchased software

Financial leasing

FISIM

Other taxes on production

Special exhaustiveness items

Net compilation of taxi centrals

*Insurance services.* The costs of the source for insurance apply to the full premium cost. Under the ESA, only the part applying to the service itself is included in intermediate consumption. With the aid of insurance statistics broken down by different types of insurance, industry by industry adjustments are estimated as the difference between premium payments and insurance services.

*Purchased software.* To a large extent enterprises record purchased software as a cost. Under the ESA, it should be investment. Intermediate consumption was therefore reduced by the share of software calculated as being contained in intermediate consumption. See investment calculations for a description of the model.

*Financial leasing.* Under the ESA the enterprises leasing the product must record it as investment instead of the lesser, and the leasing charges paid by the lessee must be recorded as interest and amortisation. In Swedish accounting practice, group accounts are to be presented in the manner required by the ESA, but at enterprise level the lessee's charges are recorded as leasing charges and it is the lesser who accounts for the investment. The primary statistics are collected at enterprise level, so that adjustment must be made for financial leasing. Total financial leasing revenue is obtained from statistics on financial enterprises. With the aid of material from the standardised accounting statements (SRU), data on rental and leasing charges for machinery are obtained on an individual industry basis, and it is possible to allocate leased motor vehicles to industries through the vehicle register. Leasing revenue is then allocated to machinery and motor vehicles, respectively, and a deduction item for financial leasing can be calculated.

*FISIM.* FISIM is allocated to sectors according to information from financial institutes and to activities based on production values.

*Other taxes on production.* Other taxes on production, for example real estate tax and vehicle tax, are items entered as costs in company accounts but may not be included under intermediate consumption. The data are obtained from the records of the Tax Agency and are deducted from intermediate consumption.

### **3.4 Roles of direct and indirect estimation methods**

Indirect methods of calculating the value of output are employed for some industries and sub-industries.

Output in agricultural products are to a great extent based on quantity multiplied by price estimates.

Output of standing timber in forestry is provided by a calculation model in which new growth is estimated by means of sample areas in which volume growth is extrapolated in cubic metres and multiplied by a standing timber price.

Output of the construction industry is calculated as the sum of building investment and repairs.

The value of the output of owner-occupied dwellings is compiled by taking the price per square metre for housing units let and multiplying it by the total area for owner-occupied units. The calculations are carried out stratified for different categories and regions in accordance with an EU Directive.

The output value for the distributive trades (trade margins) is calculated in the system of supply and use tables. Value added is obtained by the direct method, according to the SBS. Hence intermediate consumption in distribution is obtained residually.

Output of financial services are also measured indirectly by use of a special calculation model as agreed in CD 445/1998 and CD 1889/2002.

**Table 8 Calculation methods chiefly used**

SNI		Questi- onnaire survey	Administrative material	Product flows	Quantity/pri ce	Other
01	Agriculture	X			X	
02	Forestry				X	
03	Fishing	X	X			
10-12	Mining	X	X			
15-37	Manufacturing	X	X			
40-41	Electricity, gas, water, heat	X	X			
45	Construction					X
50-52	Distribution	X	X			X
55	Hotels, rest.	X	X			
60-63	Transport	X	X			
64	Communications	X	X			
65-67	Banks, insurance	X				
70	Real estate		X			X
71-74	Consultancies etc	X	X			
80	Education	X	X			
85	Health, med. care	X	X			
90-95	<b>Other services</b>	X	X			

### 3.5 Roles of benchmarks and extrapolation

As the SBS is an almost totally comprehensive source for the production approach most industries are benchmarked every year in the annual compilation. Extrapolations may be used for certain parts of the output value or in some cases to determine intermediate consumption.

### 3.6 Approach to exhaustiveness

In the product accounts information is collected and separate estimates are compiled for all parts. Explicit supplements to the output value for non-recorded activity are provided for most industries. Many industries are more or less affected by these adjustments.

In construction, output is measured with the aid of investment and expenditure on repairs, hence problems of hidden activity in the construction industry are substantially reduced. However, an explicit supplement provided for construction covers work on owner-occupied dwellings.

Previous estimates for hidden activities were mainly based on an inquiry conducted by the Swedish National Audit Office in 1998. A new material from the Swedish Tax Agency published in 2006 is now also used. It is however difficult to quantify the value of output or value added of hidden activities even from these inquiries. The magnitude of the supplements made is therefore also based on other information as well as on assessments and analysis of the supply and use tables. The supplement for the hairdressing trade is e.g. calculated as the difference between the values of the household budget statistics (HBS) and the SBS.

Income in kind (benefits) are added to the estimates. The largest benefit in kind in Sweden is represented by the benefit of cars provided by an employer for his employees' use. Information on the total amount of benefits in kind apart from car benefits, which are specified separately, is provided as a lump sum to the NA from the Income declarations to the Tax Agency. Included is e.g. luncheon concessions and housing concessions, telephone, parking, medicines, etc. Gratuities are relatively uncommon in Sweden. It is mainly in the restaurant and taxi trades and possibly in hairdressing that tips are given.

The calculations on the production and expenditure side are balanced with the aid of the supply and use tables. These tables cover approx. 400 product groups, 134 industries, 140 household consumption items, some 50 COFOG purposes for public sector activity and over 100 industries and purposes for investment.

The supply and use tables are produced simultaneously at current and constant prices, and the constant price calculation is carried out in a consistent price index system, which enables the double indicator method to be applied. Analysis of the trend in constant prices can affect the current price reconciliation. The balancing technique often involves an adjustment of intermediate consumption for industry.

Below follows a table showing the hidden activities included by industry. The explicit share in relation to GDP is now 3 percent of hidden activities. No additions are made to public sector production, so the share for the rest of the economy is 4.5 percent of gross value added.



**Table 9 Hidden activities, explicit supplements**

NACE		GVA mill. SEK	Hidden	Percent
A	Agriculture, hunting and forestry	25 611	2 681	10,47
B	Fishing	589	185	31,4
C	Mining and quarrying	11 694	48	0,4
D	Manufacturing	470 025	5 188	1,1
E	Electricity, gas and water supply	70 107	0	0,0
F	Construction	109 005	15 975	14,7
G	Trade and repair services	267 405	7 947	3,0
H	Hotels and restaurants	35 379	5 825	16,5
I	Transport, storage and communication	162 613	8 433	5,2
J	Financial intermediation	106 576	353	0,3
K	Real estate, renting and business activities	488 713	22 098	4,5
M	Education	15 481	649	4,2
N	Health and social work	49 226	3 306	6,7
O	Other community, social and personal service activities	47 951	10 558	22,0
P	Private households with employed persons	697	174	25,0
	GVA market prod. & prod. for own final use	1 861 072	83 420	4,5
	Authorities of central government	128 047	0	
	Authorities of local government	362 577	0	
	NPISH	36 466	0	
	Total gross value added	2 388 162	83 420	3,5
	Product taxes, net	347 056		
	GDP market prices	2 735 218	83 420	3,0

### 3.7.0 Agriculture, hunting and forestry, SNI 01 and 02

**Table 10 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH							
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models		CFC(PIM) & Imputed dw ellings	Other E&M	Total Extrap +Models	Other	Total
Output	1869						-5901	-5901	64470	60438
IC									37078	37078
GVA	1869	0	0	0	0	0	-5901	-5901	27392	23360
		Adjustments					Final			
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing	estimate			
Output	60438		-1726		1281		59993			
IC	37078		-1421		-1400	125	34382			
GVA	23360	0	-305	0	2681	-125	25611			

Surveys and censuses refer to the Economic Accounts of Agriculture and the National Forest Survey

Extrapolation and models refer to a special calculation because of the storm consequences in 2005.

Other refer to material from EAA and forest organisations and university.

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

### **3.7.1 Agriculture, hunting and ancillary services, SNI 01**

Output is regarded as being produced continuously over the entire period of production, not just when the crops are harvested. Hence, growing crops minus supplies are treated as inventories of work-in-progress. They are then turned into inventories of finished stocks when the process is complete. Animals for slaughter, on the other hand, are produced and registered at the same time as the transaction occurs. Livestock of animals used for more than one year are classified as fixed assets.

Output includes products for own consumption as well as products sold commercially. So-called own consumption/output in agriculture accounts for considerable sums and gives rise to supplements in the primary statistics.

The foremost source of information is the Swedish Board of Agriculture. The calculations of agricultural output are almost entirely based on the EAA-Manual (Economic Accounts for Agriculture). The Swedish Board of Agriculture has charge of the compilations and provides national accounts with the relevant data. The EAA-manual is in accordance with the ESA, however, some minor additions or subtractions still have to be made. In other cases some redistribution of the data also has to be made.

Hunting is not explicitly defined; its activity forms part of agriculture through the inclusion of the product “game meat”.

In the calculations according to the EAA-manual, the whole of Swedish agriculture is treated as a single enterprise. The national farm concept is now abandoned. The activity of agriculture is then treated as other activities within the Swedish national accounts. This implies that internal transactions within agriculture are registered gross instead of net, as previously.

## Output data from the calculations

Products in aggregate

*Cereals*

*Potatoes and other vegetables*

*Milk*

*Eggs*

*Poultry for slaughter*

*Pigs for slaughter*

*Cattle for slaughter*

*Other animals*

*Wool and hides*

*Flowers and plants*

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<i>Total value in SEK million 2005</i>	<i>31 489</i>
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Home consumption is calculated for

*Potatoes*

*Wild berries*

*Eggs*

*Reindeer meat*

*Other game*

*Meat*

*Milk*

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<i>Total value in SEK million 2005</i>	<i>939</i>
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For a number of other products special supplementary calculations may also be produced. These are obtained from data provided by intermittent statistics or estimates.

*Wild berries*

*Reindeer meat*

*Livestock breeding for hides*

*Pets*

*Animal boarding*

*Drainage (investment)*

*Planting soil*

*Services*

*Forestry management for energy*

*Services*

*Other items, including cottage lettings*

*Breeding animals (meat) and dairy cattle (for inventories and investments)*

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<i>Total value in SEK million 2005</i>	<i>6 549</i>
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Product-linked taxes and subsidies arise in agriculture; subsidies, in particular, account for considerable sums. The sources used are the annual accounts of the Swedish Board of Agriculture and data obtained from the Swedish Financial Management Authority.

**Intermediate consumption**

Intermediate consumption is collected directly from the EAA-calculations made by the Swedish Board of Agriculture. However some deductions or additions have to be done.

**Value added**

Value added arises as a net amount, since output and intermediate consumption are calculated separately.

**3.7.2 Forestry and services to forestry, SNI 02****3.7.2.1 Introduction**

The total land area in Sweden in 2005 was 41 305 ha. Of this, 23 037 ha (approx. 56 percent) consisted of forested land, 4 156 ha (approx. 10 per cent) protected areas like national parks, nature reserves and certain shooting ranges and the remaining 14 112 ha (approx. 34 per cent) farmland, moorland, mountains, built environments etc. In accordance with SNA/93 (p6.6, p6.7, p6.15, p6.18) and ESA/95 (p3.07, 3.08b, p3.119, 3.49, 3.50, 3.58.3.122b), a large proportion of the Swedish stand of forest is treated as cultivated forest. In the case of forest growth in all regions of Sweden, there is a good statistical basis for the production of incremental calculations over a period going back to the 1920s.

The value of forestry output is defined on the basis of the activities and products listed below. The industry is functionally defined and consists of institutional units, or parts of institutional units, with responsibility for and access to stocks of forestry raw materials and able to control the difference between increments to and withdrawals from these stocks. Output comprises both market output and output for own use.

Output is regarded as being produced continuously over the entire period of production, not just when the timber is felled. Growing trees are treated as inventories of work-in-progress. They are transformed into inventories of finished stocks when they are mature.

**3.7.2.2 Output value**

The output value is calculated for the felling of trees for sawmill timber, wood pulp and fuel wood. Output is also calculated for variations in the quantity of timber cut. In addition, forest drainage, forest cleaning and other forest protection measures, tree cultivation and other forestry management, including Christmas trees, and woodchips are also included. The output of car benefits is also included for forestry. On the other hand products used for food, such as berries, mushrooms etc, are assigned to agriculture.

**Table 11 Forestry output, allocated to products, 2005**

SNI	Product		SEKm
0201101	Variation in tree felling (standing timber)		-4973
0201101	Variation in tree felling (GUDRUN)		-18196
02011A	Wood pulp (Gudrun)		4161
02011B	Saw timber (Gudrun)		11205
0201105	Firewood (purchased)		75
0201105	Firewood (own)		673
02011A	Wood pulp (1)		7535
02011B	Saw timber (2)		17526
02012A	Forest drainage		1779
0201B	Tree cultivation material and other forest management products (incl. Christmas trees)		243
020101	Woodchips		924
71100A	Car benefits		32
713	Machinery lettings		16
7220EG	Personal computer benefits		16
	Total		21016

(1) Withheld production included 451 SEK m

(2) Withheld production included 830 SEK m

The calculations of production for 2005 were complicated by the storm Gudrun in the beginning of 2005 (7-9 January). This storm contributed almost a normal annual felling of timber. It also affected the growth of timber downwards. Most of the storm timber was taken care of during 2005.

#### *3.7.2.2.1 Variation in timber felled, product group 0201101*

Output of standing timber (net increment) is derived from the total of forestry resources, which grow and are felled on forestry land. Increment and felling are also dependent on use and incremental preconditions. The variation in quantity of timber cut can be either positive or negative.

The gross increment (bruttotillväxten, Bt) in the forest stand of the entire country is calculated by the Swedish University of Agricultural Sciences (Sveriges Lantbruksuniversitet, SLU) and published in Skogsdata. The selection is made up of many sample plots geographically well dispersed over the country. The tree volume increment is calculated in cubic metres. The total drain (bruttoavgången, Bavg) indicates the amount of timber felled in the forest together with the amount remaining, calculated by a standard method, and is stated in cubic metres. (Source: National Board of Forestry).

The net increment in cubic metres of standing forest (nettotillväxten, Nt), (variation in quantity of timber cut) is the difference between gross increment and total drain.

The net increment in forestry increases or reduces total supply in the form of an output value and at the same time affects total use as a change in inventories (see 5.13 on inventories).

The price used to calculate the net increment value has been the price (P) of standing forest timber for sale. (Source: National Board of Forestry). This price has from 2004 been extrapolated with delivery prices of felled timber delivered to forest roads. (Source: National Board of Forestry). The National Board of Forestry has stopped calculating this price.

Calculation for 2005, variation in quantity of timber cut

1. Volume in cubic metres of forest (m <sup>3</sup> sk):			
Bt –	BAvg =	Nt	
102,06	-122	= -19.94	
2. Price/unit:			
P = 249,4			
3. Value SEK million			
Nt *	P	= Nt	
-19.94 *	249,4	= -4973	=Prod value= Inventory

The figures for Gudrun have been taken from the Storm calculation made by the National Board of Forestry.

#### 3.7.2.2.2 Firewood, product group 0201105

The output value for firewood includes both output for sale to the market and output for own use.

The source for the calculation of output is annual Energy statistics for one and two-dwelling buildings (Swedish Energy Agency) which has information on quantities used. The price per unit of wood is the purchase price per cubic metre for birch pulpwood. (Source: Swedish Forestry Data Centre/National Board of Forestry).

#### 3.7.2.2.3 Pulp wood and saw timber, product group 02011A/02011B

The output value of felled timber (delivered to a motor road) is calculated with the aid of data on gross felling per cubic metre of pulp wood and saw timber. The source is the calculation model of the National Board of Forestry for supply. The relevant price data are obtained from the Swedish Forestry Data Centre (Skogsnäringsdatacentral, SDC), which collects prices from enterprises.

#### 3.7.2.2.4 Forest drainage, product group 02012A

The product group comprises cleaning, drainage and other forestry management operations. Output is calculated with the aid of data from the National Board of Forestry covering output for intermediate consumption and investment. The data on intermediate consumption cover expenditure for forest cleaning while investment represents expenditure for new drainage, soil preparation, forest planting etc. See also the documentation for the investment calculations.

#### 3.7.2.2.5 Forest cultivation, product group 0201B

The product group comprises Christmas trees, ornamental plants etc. The calculation model draws upon the number of households, assumptions on numbers of purchases and

unit prices. A correction is made for VAT and margins. Export and import data from the foreign trade statistics are also taken into account.

#### 3.7.2.2.6 Woodchips, product group 020101

Woodchips are mainly produced in industry, often as a waste product in sawmills etc., but a certain amount of production takes place in forestry in conjunction with timber felling. The benchmark was set at 1993 in the reconciliation in the supply/use tables. The trend follows corresponding products in industry.

#### 3.7.2.3 Intermediate consumption

Intermediate consumption in forestry is based on data from the National Board of Forestry.

#### Value added

Value added arises residually, since output and intermediate consumption are calculated separately.

## 3.8 Fishing, NACE B, SNI 05

The source for the calculations on fishing is the SBS and the statistics of Statistics Sweden and the National Board of Fisheries on commercial fishing in marine and fresh waters as well as in aquaculture. The statistical bulletins (*Statistiska meddelanden*), give a full account of output in marine and freshwater fishing and aquaculture. The statistics give detailed information on both values and quantities. The totals of output and intermediate consumption are in accordance with the SBS, but the fishing statistics contains much more details.

**Table 12 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Total	Adjustments					Final
		Data validation	Conceptual	Cut-off	Exhaust.	Balancing	
Output	1177		2		185		1364
IC	763		9			3	775
GVA	411	0	-7	0	185	-3	589

**The value of output** in 2005 was SEK 1364m, intermediate consumption SEK 775m and value added SEK 589m. An exhaustiveness estimate of SEK185m is added to production.

**Intermediate consumption** data has recently been reviewed and then revised. The source of data now is the business statistics accounts for Fishing.

**Value added** is obtained as the difference between output and intermediate consumption.

### 3.9-3.10 Mining and quarry and Manufacturing, NACE C-D, SNI 10-37

**Table 13 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Total	Adjustments					Final estimate
		Data validation	Conceptual	Cut-off	Exhaust.	Balancing	
Output	1627009	-3177	5627	0	5236	0	1634695
IC	1162291	3451	-17006	0	0	4240	1152976
GVA	464718	-6628	22633	0	5236	-4240	481719

Estimates in the total column are all from the SBS.

Validation items refer to production activities abroad incorrectly registered, deliveries registered as production and earlier reservations used for intermediate consumption in SBS

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

Output calculations are carried out for 84 different sub-industries of the mining and quarrying and manufacturing sector. The industry grouping is based on activity units (apart from Samhall). Samhall (Swedish Institute for Assessment of the Working Capacity of Handicapped People), is a limited company wholly owned by the State which exists to promote activities for disabled workers. The wages paid to the disabled workers are financed from central government funds. Samhall's total activity is recorded in a special industry within NACE C-D.

#### *Output values*

The total value of output is the sum of industrial production and income from other activities by industrial activity units. Estimates on total output are based on the SBS with a detailed breakdown on different products from the statistics of goods production by industry (Industrins varuproduktion, IVP).

The output values for industrial enterprises with 0-19 employees are calculated on the basis of the Tax Agency's standardised accounting statements (SRU). Total turnover on the basis of SRU is adjusted for gross trading activity. With the aid of industry-based coefficients for trading activity in larger activity units in accordance with the IVP, income and costs are calculated for trading activity. The trade margins are calculated and total output value is obtained as the sum of trade margins and other output. Other output is assumed in its entirety to be industrial production.

Industrial production covers production of goods, repairs/maintenance for outside entities, contract processing for outside entities, assembly/installation at the premises of outside entities and other processing.

*Production of goods* is recorded in the IVP as values and quantities broken down by products in accordance with the Combined Nomenclature (CN). Products that are manufactured in another activity unit within the enterprise and are sold on without further processing are only recorded for the activity unit in which the products were manufactured. The valuation includes any profit margin for re-selling units.



*Repairs/maintenance for outside entities* covers remuneration for all such work, apart from that done on buildings, structures and motor vehicles. This is included in income from other activity.

*Contract processing for outside entities* covers remuneration received for processing and compensation for own materials if used.

*Assembly/installation for outside entities* represents remuneration for such work carried out by the establishment's own staff.

*Other processing* covers all other processing, such as bleaching, dyeing, grinding, printing, gilding, etching, lacquering etc.

*Other activities:* The output value represents income from non-industrial activity. This is recorded in the statistics on various products in accordance with the Swedish Standard Classification of Products of Activity (Svensk produktindelning, SPIN). Income from trading activity, which is recorded gross in the statistics, is converted to net values by comparison with the data on 'purchase value of goods of outside manufacture which are sold without further processing (goods for resale).

*Work in progress:* For industries producing goods, which take a long time to produce, the change in stocks for work-in-progress, is included in the output. The change in stocks is valued on the same conditions as the finished product, e.g. if the product is completed to 50 per cent it is valued to 50 per cent of the final basic price. However, sometimes estimates may be based on costs incurred with a mark-up for operating surplus. In some cases, then it is hard to estimate the value of the finished product, e.g. aeroplanes, only the cost of production is used.

*Investment on own account* in industrial activity units consists of software production and mineral exploration. Production of software is calculated for the whole economy by industries and sectors. The calculations are based on data on numbers of persons employed on programming and system configuration within the various industries, see section 5.11.2.

Mineral exploration is calculated with the aid of data from a government agency, the Geological Survey of Sweden.

Companies with substantial values in SBS on activated work for own account is further investigated by for example looking in their annual reports. This indicates that activated work for own account mostly are expenses for research and development.

*Car benefit* consists of the proportion of the costs of company-owned cars representing the use of cars for private purposes by employees. The value is calculated with the aid of declaration data on taxable employee benefits in a total calculation for the economy as a whole. See further in section 3.3.

*Hire of PCs:* With the intention of increasing the PC skills of the population, a scheme was set up at the end of 1998 for an employee to hire a PC from his employer for 36 months in return for an agreed concessionary charge to the employee. The concessionary charge is deducted monthly from the employee's gross pay. When the period of hire has expired, the employee must be given the opportunity to purchase the machine at its residual value. Under this scheme the employee can obtain a PC at a lower price, since the employer is able to deduct the VAT on purchased goods in his accounts. The employer gains from the fact that the staff acquires PC skills in their spare time, which benefits the

employer through the more effective use of PCs during working hours. The expenditure of households for the hire of the PCs is covered under household final consumption. At the same time the same amount is treated as a pay-related benefit. The recording in the annual accounts follows the same principle as that applicable to car benefits. The value at current prices is calculated taking the number of machines times the average monthly amount.

*Samhall:* The output value is equated with the total sales figure for the company. The company engages in both industrial production and other goods production and the production of services.

**Table 14 The total output value for 2005 breaks down as follows:**

	Mnkr	Per cent
Goods production	1372076	83.3
Repairs/maintenance	28915	1.8
Contract processing	13091	0.8
Assembly/installation	7639	0.5
Other processing	77225	4.7
<i>Total industrial production</i>	<i>1498946</i>	<i>91.0</i>
Trade margin	63405	3.8
Transport and communications	2316	0.1
Real estate, plant hire and business services	69806	4.2
Other	4312	0.3
<i>Total other activities</i>	<i>139839</i>	<i>8.5</i>
Software	2168	0.1
Mineral exploration	130	0.0
Car benefit	2465	0.1
PC hire	923	0.1
Samhall	3064	0.2
<b>Total output</b>	<b>1647535</b>	<b>100.0</b>

### *Intermediate consumption*

The total estimates of Intermediate consumption are based on the SBS. For the detailed break-down the survey INFI (Industrins förbrukning av inköpta varor och tjänster) is used. INFI is an intermittent survey that every third year measures the costs for a third of the industries on a detailed level.

*Samhall* Intermediate consumption is calculated on the basis of company data broken down by the different operating cost categories.

Total intermediate consumption for each year is balanced and assessed for plausibility with reference, inter alia, to the input coefficients at current and constant prices. This is done for the 84 industries in the supply and use tables for approx. 400 different product groups.

### *Value added*

Value added for each industry is obtained as the difference between output value and intermediate consumption value.

### 3.11 Electricity, gas, heat and water supply, NACE E, SNI 40-41

**Table 15 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH					Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models					
			Benchmark	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M	Total Extrapolation +Models		
Output	100531		13518						114062
IC	4627		41236						45863
GVA	95904	0	-27718	0	0	0	13	0	68199
		Adjustments					Final		
	Total	Data validation	Conceptual	cut-off	Exhaust.	Balancing	estimate		
Output	114062	-2585	211			0	111688		
IC	45863	-533	-3901			152	41581		
GVA	68199	-2052	4112			-152	70107		

Surveys and censuses refer to the Annual Energy Statistics surveys, which contains information on the supply of electricity, district heating and gas and the annual survey Energy Use in Manufacturing Industry, containing use per industry of a range of energy sources. Energy Statistics for Dwellings and Non-residential Buildings, also a yearly survey, provides similar information for service sector industries. The Summary of municipal accounts gives information of local government activities.

Combined data refer to SBS

Extrapolation and models refer to an addition for gas

Data validation refer to transformation from partly product information to industry values

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Balancing is the item used in the final consolidation process between production and expenditure sides.

In the Swedish national accounts NACE E consists of four sub-industries; SNI 40.1 Electricity works, SNI 40.2 Gasworks, SNI 40.3 Heat generating plants and SNI 41 Waterworks including sewage disposal. Thus, the Waterworks industry also includes sewage plants, which form a part of SNI 90.

#### **SNI 40.1 Electricity works and SNI 40.3 Heat generating plants**

The production of electricity and of district heating is ascertained primarily through sources covering the intermediate consumption of these products. A number of sources are utilized and together result in an exhaustive break-down by user category. In order to assign the total production to specific industries (mainly electricity works and heat generating plants) information from the SBS is used. More specifically, the relative shares of electricity and district heating production according to the SBS are used to determine the amount of production to assign to each industry.

#### *Output*

Output mainly consists of the generation and distribution of electric power as well as steam and hot water (district heating) and is measured as the sum of deliveries to final consumers (including exports) minus imports. Furthermore, secondary output consists of

construction works and of consultancy services which significantly contribute to the total value of output.

The calculations are based mainly on the annual general inquiry of Statistics Sweden on electricity, gas and district heating supply, which incorporates data from producers and distributors of electricity and district heating. In addition an annual SCB inquiry “Energy use in the manufacturing industry (ISEN)” on the intermediate consumption of electricity and district heating by manufacturing industry is used. The annual survey “Energy statistics for dwellings and non-residential buildings” provides the basis for electricity/district heating use of the service sector industries as well as that of public institutions. With these sources, deliveries of high and low-voltage power and district heating are ascertained. The data are obtained in terms of both quantities and values and are broken down by the different consumer categories. The output value is obtained as the sum of final deliveries, i.e. excluding internal deliveries within the industry between different electricity and district heat generating plants, minus imports.

Information is also gathered from the SBS but the specific energy surveys give a lot more of detailed information. The source for output of the most product groups except electricity and heat is the SBS. During the last years, studies of differences between the SBS and the inquiry on electricity, gas and district heating have been carried out. However it has been very difficult to compare the two sources because of differences in register and data. For example, enterprises in one inquiry have recorded data for the whole concern and in the other data on a lower level. Enterprises have also used different identities of the organizations, which make comparisons very timeconsuming.

#### *Intermediate consumption*

The costs of electricity and heat generating plants for different types of intermediate consumption – fuels, auxiliaries, intermediate consumption of services, repairs etc. – are based on data from the same source as production. The intermediate consumption of fuels is recorded in that source in terms of quantities and values according to product type. In order to calculate costs of repairs and maintenance to buildings and structures, use is made of data from SBS covering companies in the electricity industry. The statistics contain data on costs of purchased maintenance and repair work and are used to estimate the total repair costs of the industry.

#### *Value added*

Value added is obtained residually as the difference between output and intermediate consumption.

### **SNI 40.2 Gasworks**

#### *Output*

The basis for the annual calculations covering the gasworks industry (40.2) is provided by data from the SCB annual inquiry on electricity, gas and district heating supply and ISEN with data on the intermediate consumption of purchased natural and town gas. Data are obtained on deliveries and costs of natural and town gas. The inquiry covers all distributors of natural gas and town gas respectively. Deliveries to different consumer categories, in terms of both value and volume, gives output at current and constant prices.

### *Intermediate consumption*

In the same statistical source as that used for the output calculations there are data on the intermediate consumption by gasworks of raw materials, in terms of both quantity and value. On the other hand, detailed breakdown is lacking on the intermediate consumption of services, but the total estimate is based on the SBS.

### *Value added*

Value added is obtained residually as the difference between output and intermediate consumption.

## **SNI 41 and part of SNI 90 Waterworks including sewage disposal**

In Sweden waterworks are extensively integrated with sewerage functions. It is thus very difficult to obtain data shown separately for waterworks in respect of several aspects, e.g. income, costs and employment. The industry thus covers both water supply and sewage disposal.

### *Output*

Apart from principal production, i.e. water supply including sewerage, the industry's secondary activities, such as construction, real estate management and architectural and technical consultancy services, are recorded separately.

Data on the output of Waterworks and sewerage is obtained from the SBS and from the summaries of accounts of local government activity. Primary output consists of water and sewerage and secondary production includes district heating and waste. The output value attributable institutionally to the local government sector is calculated in the summaries of accounts for local government activity and added to the output value from the SBS.

### *Intermediate consumption*

The industry's intermediate consumption is also provided by the SBS and by the summaries of accounts of local government activity. Balancing and plausibility assessment are performed in the supply and use tables.

### *Value added*

Value added is obtained residually as the difference between output and intermediate consumption.

## **3.12 Construction, NACE F, SNI 45**

**Table 16 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH				Total	Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	Benchmark Extrapolatio and models	CFM and ratios	CFC(PIM) & Imputed dw ellings	Other E&M	
Output			12018					681	681
IC								114640	114640
GVA		0	12018	0	0	0	-113959	-113959	191944
		Adjustments						Final	
	Total	Data validation	Conceptual	cut-off	Exhaust.	Balancing		estimate	
Output	204643		940		15975		221558		
IC	114640		-2498			411	112553		
GVA	90003	0	3438	0	15975	-411	109005		

Combined data refer to SBS

Extrapolation and models refer to the treatment of intermediate consumption, see below

Other refer to the circumstance that output is mainly based on compilations of investments and repairs.

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustiveness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

### 3.12.1 Introduction

Construction activity is defined as the erection, alteration and repair of accommodation buildings and other structures, including demolition and foundation works, installations and miscellaneous ancillary activities. The output of the industry comprises both activity carried out by actual construction and building trades enterprises and construction on own account by central and local government, self-builders etc. In order to be classified as a construction activity, construction on own account must either constitute new production or, as regards repair and maintenance work, be carried out by separate establishments or similar units. This means that much of the repair and maintenance work carried out by the firms' own staff must be treated as intermediate consumption of materials and not of building production services.

Output value is calculated for the following product groups, the table shows the values at current prices for 2005:

**Table 17 Product groups and values at current prices for 2005**

Product group	Description	2005, SEK million	%
45	Construction	208 859	94,27%
742A	Construction services abroad	4 987	2,25%
142	Sand, gravel, rock and clay	2 055	0,93%
7020A	Other real estate letting	1 501	0,68%
5C	Trade margin	822	0,37%
266	Concrete, cement and plaster products	711	0,32%
71100A	Car benefits	627	0,28%
292	Other general purpose machinery	438	0,20%
742	Architectural and technical consultancy	373	0,17%
713	PC	260	0,12%
29569	Miscellaneous other special machinery	200	0,09%
268	Other non-metal mineral products	198	0,09%
5AB	Merchanting	98	0,04%
24300	Paints, varnishes, printing inks etc.	81	0,04%
741A	Licence, patent and royalty services	77	0,03%
2030100	Prefabricated timber houses	75	0,03%
31100	Electric motors, generators and transformers	53	0,02%
7220EG	Computer systems/software produced on own account	53	0,02%
31200	Electricity distribution and control apparatus	52	0,02%
281	Structural metal products	34	0,02%
24110	Industrial gases	2	0,00%
287	Other metal products	1	0,00%
34200	Bodies for motor vehicles; trailers, semitrailers	1	0,00%
		221 558	100,00%

### **3.12.2 Sources and methods**

#### *3.12.2.1 Building output statistics*

Statistical information in the area is collected in the Structural Business Statistics (SBS). However, because of the complexity of this industry, including a lot of production units from different enterprises, contracted in several stages and engaged in joint ventures, the source have not yet been found to be of an overall sustainable quality. Therefore, the approach described in the following is used, where the SBS partly is used.

#### *3.12.2.2 Construction (Product group 45)*

The total output value is obtained at both current and constant prices as the sum of all investment and expenditures for purchased repair and maintenance services in respect of buildings and structures. The main source for investments is the SBS and the special compilations of dwellings. The output value of the construction industry is obtained by deducting building production produced within other industries from the total output value. The investment calculations are described in the section 5.10 on acquisition minus disposal of tangible fixed assets.

Repairs to buildings and structures are calculated for all sectors and industries in which they are assumed to occur. The statistical material is almost entirely calculated from the SBS. Repair figures are explicitly available for agriculture and for permanent dwellings. The statistical material for departments and agencies of government also contains data on building repairs; see section 5.9 on public sector consumption.

Building repairs in agriculture are calculated by the Swedish Board of Agriculture. Housing repairs in multiple-occupancy buildings are compiled from an annual SCB inquiry: The revenues and expenditure survey for multi-dwelling (Intäkts- och kostnadsundersökningen för flerbostadshus, IKU). Repairs for one and two family houses are compiled from an annual SCB sample survey: Household finances (Hushållens ekonomi, HEK).

#### *3.12.2.3 Other major and special product groups*

The trade margin (5C), other real estate letting (7020A) and architectural and technical consultancy (742) all use data from the SBS while sand, gravel, rock and clay (142), concrete, cement and plaster products (266), other general purpose machinery (292), miscellaneous other special machinery (29569) and other non-metal mineral products (268) use data from The industrial goods production statistics (Industrins varuproduktion, IVP). For sources and calculation methods on construction services abroad (742A) see section 5.16, car benefits (71100A) see section 4.7 and for computer systems/software produced on own account (7220EG) see section 5.11.

#### *3.12.2.4 Intermediate consumption*

Information on some large projects characteristic to the industry has partly been used together with the material in the SBS. Information has also been supplied by the trade organisation, Sveriges Byggindustrier. They were very helpful in connection with the definitive calculations of 2005, so the structure of inputs was partly changed and the input coefficients were also somewhat raised.

### 3.12.2.5 Value added

Value added is obtained as the difference between output value and intermediate consumption value.

## 3.13 Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods, NACE G, SNI 50-52

**Table 18 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

Table 10.1 Process table of output, intermediate consumption and gross value added, 2002, MS EX1											
	Basis for NA Figures		PRODUCTION APPROACH								
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models		CFC(PIM) & Imputed dwellings	Other E&M	Total Extrap +Models	Other	Total	
				Benchmark Extrapolatio and models	CFM and ratios						
Output	356		89391		317097			317097		406844	
IC	204		9317		151552			151552		161073	
GVA	152	0	80074	0	165545	0	0	165545	0	245771	
		Adjustments						Final			
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing		estimate			
Output	406844	3969	6237		4478	0		421528			
IC	161073	3969	-8041		-3469	591		154123			
GVA	245771	0	14278	0	7947	-591		267405			

Surveys and censuses refer to the summary accounts of local government.

Combined data refer to SBS (IC for NACE50.2)

CFM and ratios refer to Trade margins estimated in the supply-use framework and to the IC received as a residual item between output and value added

Data validation refer to re-order of goods for resale or used in repairs

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

In the Swedish national accounts the industry is divided into two parts: SNI 50-52 excl. 50.2 wholesale and retail trade excluding the repair of motor vehicles and SNI 50.2 repair of motor vehicles.

### 3.13.1 SNI 50-52 excl. 50.2 wholesale and retail trade excluding the repair of motor vehicles

#### Output

The output value is obtained from the business statistics with adjustments to comply with the national accounts definitions in line with ESA 95. Output is made up mainly of the trade margins which arise on the resale of goods in wholesale and retail trade, i.e. the difference in value between the sale price and the cost of purchase of the goods sold. The total trade margin for all industries is obtained annually in the national accounts supply and use tables, in which they are directly linked to the purchasers' price value for each use. For each type of use, i.e. household consumption, public-sector intermediate consumption, investment, export, and intermediate consumption in industry, a trade



margin is calculated for various goods in the system. Because use is distributed over a large number of purposes and industries, the trade margin is calculated on a very detailed level. The linkage to each individual purchaser price value means that the trade margin changes at the same rate as the purchaser price value to which it is linked. The trade margin in wholesale and retail trade arises residually as the total trade margin minus trade margins produced in the other industries.

The output value in the industry is not only made up of trade margins, however. The output value of the industry also includes:

- Production of goods (source: IVP)
- Export of trade commissions and commissions on pools, lottery and bingo transactions
- Restaurant and hotel services produced by enterprises classified under distribution
- Repair of motor vehicles, household goods and other machines/appliances
- Production of other business services, e.g. film copying
- Production of rental on premises
- Hire/leasing of motor vehicles and machinery

As for other service industries, the previous intermittent inquiries in order to convey a more detailed picture of the industry's structure, income and costs etc are now conducted annually and integrated with the SBS. In the inquiries on the retail trade data is collected on aspects such as the share of turnover represented by premises rental, repair and hire/leasing activities. The shares in question form the basis for the calculation of the output of these (secondary) activities. The output value for services to agriculture, which consist of seed drying and repackaging of agricultural products, is based on data from the National Board of Agriculture. The value of export of licences is based on data from the Survey of Services in foreign trade and annual report from the companies in question. This material gives more details in this area than SBS. Commissions are based on export data too, but here data from the Lottery Inspectorate on commercial agency commissions are also used together with SBS information.

A special model is used for stating the total value of trade margins of NACE G. It is based on details for trade activity on the lowest 5-digit level of classification.

Some of the spare parts recorded in the business statistics as being goods for resale are in fact input in the repair service and are therefore added to the value of the service in the NA calculations. The trade margin and intermediate consumption in the industry are recalculated accordingly. For the repair of motor vehicles and motor bicycles a supplement is included for informal activity.

#### *Intermediate consumption*

Intermediate consumption is obtained as the difference between output value and value added.

#### *Value added*

Value added is picked up from the SBS.

### 3.13.2 SNI 50.2 Repair of motor vehicles

#### *Output*

The output value is obtained from the SBS (see chapter 3.3). The industry comprises enterprises whose main activity is the maintenance and repair of motor vehicles. Some of the spare parts recorded in the business statistics as being goods for resale are in fact input in the repair service and are therefore added to the value of the service in the NA calculations. The trade margin and intermediate consumption in the industry are recalculated accordingly. A supplement is included for informal output.

**Table 19 Data on the output value SNI 50.2**

Product group	Description	2005 SEK million	Percentage weighting
7220EG	Computer systems/software produced on own account	17	0.1
741A	Licence, patent and royalty services	35	0.1
713	Hire of machinery and equipment	20	0.1
71100A	Car benefits	46	0.2
741	Legal and business consultancy	102	0.4
251A	New and rethreaded tyres and tubes	144	0.6
7020A	Other real estate letting	158	0.6
71100	Motor vehicle hire (cars and vans)	148	0.6
5A-C	Trade Margin etc.	1785	7.0
50A	Repair of motor vehicles incl. motorcycles	23109	90.4
Total		25564	100.0

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

## 3.14 Hotels and restaurants, NACE H, SNI 55

**Table 20 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Total	Adjustments					Final estimate
		Data validation	Conceptual	Cut-off	Exhaust.	Balancing	
Output	76466	-27	142		5825		82406
IC	47508	-27	-626			172	47027
GVA	28958	0	768	0	5825	-172	35379

Estimates in the total column are all from the SBS.

Validation items refer to an inappropriate registration in the source material.

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

### *Output*

The hotels and restaurants industry consists of enterprises with an activity involving hotels, youth hostels, camping sites, restaurants, catering etc. Data on the output value are obtained from the SBS. However, a number of special investigations have been made of the restaurant business and there are proof of concealed turnover and not registered staff and wages. Therefore a substantial addition of 20 percent has been made on gross value added for hidden activities. The size of the estimate is based on the Tax Agency investigation of hidden income as reported in their Report 2006:4B. Estimates of these activities are of course uncertain and no information on annual changes is available. The present estimate is benchmarked for 2000 and extrapolated with the annual change of declared activities. Steps have been taken in order to reduce hidden activities and one thing is the introduction of a special employee register and unannounced inspections and fines if the register is not correct by inspection time. The law is in effect from 1 January 2007 and there was a considerable increase in wages paid from that date.

The following table shows the distribution of production on various product groups in the NA system. Trade margins relate to items sold without further processing. Sporting and recreational activities are offered at the venues in the mountainous and snowy areas of Northern Sweden.

**Table 21 Data on the output value SNI 55**

<b>Product group</b>	<b>Description</b>	<b>2005 SEK million</b>	<b>Percentage weighting</b>
221	Products from publishing activity	18	0.0
7220EG	Computer systems/software produced on own account	34	0.0
921	Motion picture and video activities	1	0.0
71100A	Car benefits	60	0.1
9304	Physical well-being activities	42	0.1
713	Hire of machinery and equipment	48	0.1
7020A	Other real estate letting	169	0.2
741A	Licence, patent and royalty services	198	0.2
926	Sporting activities	130	0.2
9272	Other recreational activities	282	0.3
923A	Theatre, entertain.	315	0.4
741	Legal and business consultancy	736	0.9
5A-C	Trade Margin etc.	762	0.9
552	Camping and other accommodation services	1087	1.3
555	Canteen, catering and central kitchen services	5680	6.9
551	Hotel services	16028	19.5
55A	Restaurant and bar services	56816	68.9
Total		82406	100.0

The trade margin refers to the margin the industry obtains from the sale of goods.

### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

## **3.15 Transport, storage and communication, NACE I, SNI 60-64**

**Table 22 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH					Total	Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M			
				Extrapolatio and models				Total Extrap +Models		
Output	13473	0	475402	0	0	0	0	0	0	488875
IC	11156	0	326940	0	0	0	0	0	0	338096
GVA	2317	0	148462	0	0	0	0	0	0	150779
		Adjustments						Final estimate		
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing				
Output	488875	-26322	3943	0	8433	0		474929		
IC	338096	-16508	-10414	0	0	1142		312316		
GVA	150779	-9814	14357	0	8433	-1142		162613		

Surveys and censuses refer to summary accounts of local government and SAS survey.

Combined data refer to SBS

Data validation refer to corrections of the SBS estimates for double recording of taxi, haulage and air transport and of financial services moved to SNI 67.

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

In the Swedish national accounts, NACE I is split up into several sub-industries. For most sub-industries the source for output value and intermediate consumption are the business statistics. For some industries, however, other sources are used to obtain the value for output and intermediate consumption. Value added is calculated as the difference between output value and intermediate consumption value. An account is given below of the sources, product groups etc. for the various industries.

### **3.15.1 SNI 60 Land transport**

#### *3.15.1.1 SNI 60.10 Railway transport*

#### *Output*

The group comprises passenger and goods transport by main-line railway services. Rail-based local transport, for example tramway services in towns, is not included. These forms of transport are recorded in SNI 60.21 Other scheduled land transport. Commuter train services within the Greater Stockholm area are also classified in this group. However, some commuter trains are operated under contract by railway companies, hence

an output value for this transport also arises under Railway transport. The business statistics are the source for all output. The product subsidies are benchmarked with data obtained from the Swedish Financial Management Authority

**Table 23 Data on the output value SNI 60**

Product group	Description	2005 SEK million	Percentage weighting
7020A	Other real estate letting	5	0.0
71100A	Car benefits	5	0.0
713	Hire of machinery and equipment	11	0.1
7220EG	Computer systems/software produced on own account	21	0.2
35200	Railway locomotives and rolling stock	32	0.3
63301	Package tours by air and bus, domestic and foreign	42	0.3
55A	Restaurant and bar services	82	0.6
71210	Hire of other land transport equipment without driver	89	0.7
60240	Road transport, goods	308	2.4
60100B	Passenger transport by railway: contract	771	6.1
60100C	Goods/ore transport	5402	42.5
60100A	Passenger transport by railway	5954	46.8
Total		12722	100.0

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### *3.15.1.2 SNI 60.21 Other scheduled land transport*

##### *Output*

The output value in this industry covers public transport and scheduled bus services and is based mainly on the business statistics. For transport provided by municipal public-service undertakings, the data are obtained from the local authority finance statistics. The value of the product subsidies is benchmarked against data obtained from the Swedish Institute for Transport and Communications Analysis (SIKA). A supplement is included for informal activity.

**Table 24 Data on the output value SNI 60.21**

Product group	Description	2005 SEK million	Percentage weighting
71100A	Car benefits	9	0.0
741A	Licence, patent and royalty services	18	0.0
5A-C	Trade Margin etc.	15	0.0
7220EG	Computer systems/software produced on own account	28	0.1
713	Hire of machinery and equipment	31	0.1
35200	Railway locomotives and rolling stock	94	0.2
744	Advertising services	104	0.2
6021B	Goods transport (public transport)	132	0.3
741	Legal and business consultancy	265	0.6
7020A	Other real estate letting	441	1.1
60230	Passenger transport, bus	913	2.2
71210	Hire of other land transport equipment without driver	1933	4.6
6021A	Passenger transport (public transport)	37651	90.4
Total		41634	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are carried out in the supply and use tables.

*Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

*3.15.1.3 SNI 60.22 Taxis**Output*

The output value covers taxi activity and is obtained from the business statistics. A supplement is included for unrecorded turnover, i.e. tips and hidden activities.

**Table 25 Data on the output value SNI 60.22**

Product group	Description	2005 SEK million	Percentage weighting
741	Legal and business consultancy	1	0.0
741A	Licence, patent and royalty services	5	0.0
71100A	Car benefits	11	0.1
7220EG	Computer systems/software produced on own account	11	0.1
713	Hire of machinery and equipment	9	0.1
60230	Passenger transport, bus	110	0.8
63210C	Other supporting land transport activities	118	0.9
60220	Taxi transport	12936	98.0
Total		13201	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are carried out in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### *3.15.1.4 SNI 60.23 Charter bus transport*

### *Output*

The output value includes chartered bus services, coach excursions and other unscheduled bus transport. The output value is obtained from the business statistics.

**Table 26 Data on the output value SNI 60.23**

<b>Product group</b>	<b>Description</b>	<b>2005 SEK million</b>	<b>Percentage weighting</b>
71100A	Car benefits	2	0.1
7220EG	Computer systems/software produced on own account	3	0.1
713	Hire of machinery and equipment	3	0.1
5A-C	Trade Margin etc.	3	0.1
6021A	Passenger transport (public transport)	1348	44.7
60230	Passenger transport, bus	1657	54.9
Total		3016	100.0

### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are carried out in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### *3.15.1.5 SNI 60.24 Freight transport by road*

### *Output*

The industry covers transport by goods vehicles operated by haulage firms. Transport by goods vehicle is also performed extensively by the distribution industry and the manufacturing and construction industries, but such transport operations are an ancillary activity within these industries. The output value including allocation to product groups is obtained from the business statistics.

**Table 27 Data on the output value SNI 60.24**

Product group	Description	2005 SEK million	Percentage weighting
7020A	Other real estate letting	24	0.0
7220EG	Computer systems/software produced on own account	17	0.0
741A	Licence, patent and royalty services	4	0.0
71100A	Car benefits	79	0.1
713	Hire of machinery and equipment	62	0.1
63110	Cargo handling	111	0.2
71210	Hire of other land transport equipment without driver	101	0.2
741	Legal and business consultancy	125	0.2
63120	Storage and warehousing	186	0.3
5A-C	Trade Margin etc.	192	0.3
90	Sewage and refuse disp.	311	0.5
45	Construction	1284	1.9
63400	Other transport agency services	1473	2.2
60240	Road transport, goods	61962	94.0
Total		65931	100.0

For freight transport, a supplement is included for informal activity.

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

### **3.15.2 SNI 61 Sea transport**

#### *Output*

Data on the output value are obtained from the business statistics (SBS). The breakdown of output value by product groups is shown in the table below. Primary output consists of passenger transport and freight transport by sea, coastal waters and inland waterways and the provision of ships and boats for charter in sea, coastal and inland waterway transport. The trade margin and restaurant and bar services apply to on-board sales that are not contained in ticket prices. For passenger transport, a supplement is included for informal activity.



**Table 28 Data on the output value SNI 61**

Product group	Description	2005 SEK million	Percentage weighting
7220EG	Computer systems/software produced on own account	17	0.0
741A	Licence, patent and royalty services	10	0.0
713	Hire of machinery and equipment	19	0.0
71100A	Car benefits	28	0.1
63301	Package tours by air and bus, domestic and foreign	100	0.3
741	Legal and business consultancy	108	0.3
5A-C	Trade Margin etc.	154	0.4
63400	Other transport agency services	216	0.6
63220A	Port services	330	0.8
71220	Hire of ships and boats without master	301	0.8
55A	Restaurant and bar services	654	1.7
745	Labour recruitment and provision of personnel	1925	4.9
61A	Passenger transport, boat/ship	2390	6.1
61C	Hire of ships and boats	8223	21.0
61B	Goods transport, boat/ship	24713	63.1
Total		39188	100.0

Apart from shipping output calculated directly, output of car benefits and software produced on own account in the industry is also ascertained by special calculations. In addition a certain amount of shipping output arises in the primary municipalities.

On the cost side figures recorded include fuels, port, navigation and pilotage dues, loading and discharging costs, time-charters, commissions, repairs and maintenance, provisioning, procurement of restaurant supplies etc., wages and salaries and miscellaneous items.

Data on the costs of overseas shipping are used in order to calculate the import value of shipping.

#### *Intermediate consumption*

Intermediate consumption is obtained from the SBS. Balancing and plausibility assessment are carried out in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

### **3.15.3 SNI 62 Air transport**

The industry includes all enterprise units covered by SNI Industry 62. The dominant enterprise is Scandinavian Airline System (SAS), which is jointly owned by the Scandinavian countries. The enterprise is a consortium, 3/7 of which is owned by Sweden and 2/7 each by Norway and Denmark. Under an agreement between the countries, the consortium's total income and expenditure is divided between them in proportion to their ownership shares. Accordingly, three sevenths of the output, intermediate consumption and value added of the SAS consortium are assigned to the Swedish national accounts.

### 3.15.3 1 Sources for output value and intermediate consumption:

#### SAS

The data for SAS are collected every quarter through a special survey. The survey provides information both on income and expenditure for the SAS consortium as a whole as well as an estimate of sales to and from Swedish subjects. From the data for the consortium as a whole, the 3/7 fraction to be allocated to the Swedish national accounts is derived. In the product-by-product supply and use tables output and intermediate consumption on Swedish territory are shown allocated to different products.

#### Air transport enterprises excluding SAS

The remaining air transport enterprises are covered by the Structural Business Statistics (SBS).

The total output value is allocated to a number of product groups including passenger transport, goods transport, hire of aircraft, air transport support, trade margins, as well as a variety of business services. The value of car benefits, PC benefits and software produced on own account is also added to the output values according to the table below:

**Table 29 Data on the output value**

Product group	Description	2005 SEK million	Percentage weighting
713	Hire of machinery and equipment	12	0.0
71100A	Car benefits	29	0.1
72A	Other data processing services	21	0.1
7220EG	Computer systems/software produced on own account	46	0.2
62C	Hire of aircraft	130	0.5
5A-C	Trade Margin etc.	228	0.9
6330A	Other travel organising and tourist assistance activities	341	1.3
35300	Aircraft and spacecraft	374	1.4
742	Architectural and technical consultancy	400	1.5
743	Technical testing and analysis	400	1.5
748	Other business services	522	1.9
62B	Goods transport, air	529	2.0
63230	Other supporting air transport activities	548	2.0
7020A	Other real estate letting	584	2.2
741	Legal and business consultancy	801	3.0
745	Labour recruitment and provision of personnel	970	3.6
71230	Hire of aircraft without crew	1384	5.2
62A	Passenger transport, air	19479	72.7
Total		26798	100.0

#### *Intermediate consumption*

Intermediate consumption is calculated on the basis of the Structural Business Statistics. Balancing and plausibility assessment are carried out in the supply and use tables.

#### *Value added*

The industry's value added is obtained as the difference between output value and intermediate consumption.

### 3.15.4 SNI 63 Support services to transport; travel agency activity

#### 3.15.4.1 SNI 63.10 Freight handling and storage

##### *Output*

The output value is obtained from the business statistics.

**Table 30 Data on the output value SNI 63**

Product group	Description	2005 SEK million	Percentage weighting
5A-C	Trade Margin etc.	1	0.0
713	Hire of machinery and equipment	12	0.1
71100A	Car benefits	19	0.2
741	Legal and business consultancy	18	0.2
7220EG	Computer systems/software produced on own account	26	0.3
7020A	Other real estate letting	158	1.8
60240	Road transport, goods	198	2.2
63400	Other transport agency services	512	5.8
63220A	Port services	1391	15.8
63120	Storage and warehousing	1906	21.7
63110	Cargo handling	4560	51.8
Total		8801	100.0

The source for the allocation of output value to product groups is the SBS. The product group Freight handling includes stevedoring.

##### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

##### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### 3.15.4.2 SNI 63.21 Other support services to land transport

##### *Output*

The output value is obtained from the business statistics. Other support services also include the operation of toll roads. For parking, a supplement is included for informal activity. Most of the income recorded in the business statistics by the taxi supporting companies is in fact income generated by the taxi companies and is therefore subtracted from the output value in the NA calculations. The same amount is deducted from the intermediate consumption in the industry. Output of the taxi supporting companies is the value of the service they give to the operating taxi companies. The net income received from the taxi companies is included in the value of product group 63210C in the table below.

**Table 31 Data on the output value SNI 63.21**

Product group	Description	2005 SEK million	Percentage weighting
5A-C	Trade Margin etc.	3	0.0
71100A	Car benefits	7	0.1
7220EG	Computer systems/software produced on own account	6	0.1
713	Hire of machinery and equipment	4	0.1
748	Other business services	10	0.2
741A	Licence, patent and royalty services	22	0.4
63110	Cargo handling	104	1.7
746	Investigation and security activities	129	2.1
741	Legal and business consultancy	151	2.4
60240	Road transport, goods	542	8.7
63210B	Toll road and bridge services	728	11.6
63210C	Other supporting land transport activities	1947	31.2
63210A	Parking services	2596	41.5
Total		6249	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

*Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

*3.15.4.3 SNI 63.22 Other support services to sea transport**Output*

The output value is obtained from the business statistics.

**Table 32 Data on the output value SNI 63.22**

Product group	Description	2005 SEK million	Percentage weighting
71100A	Car benefits	3	0.1
741A	Licence, patent and royalty services	4	0.1
713	Hire of machinery and equipment	4	0.1
63110	Cargo handling	288	9.7
7020A	Other real estate letting	296	9.9
63220A	Port services	572	19.2
63220B	Pilotage and other navigation services	1816	60.9
Total		2983	100.0

Part of the output of other support services to shipping is generated by the primary municipalities, and the value of this is collected from the local government information. In addition special calculations are carried out for car leasing and software produced on own account.

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### 3.15.4.4 SNI 63.23 Other support services to air transport

##### *Output*

The output value is obtained from the business statistics. A large part of the output value is attributable to the Civil Aviation Administration, which is a government public-service undertaking.

**Table 33 Data on the output value SNI 63.23**

Product group	Description	2005 SEK million	Percentage weighting
804	Adult and other education	2	0.0
63110	Cargo handling	8	0.1
71100A	Car benefits	8	0.1
741A	Licence, patent and royalty services	6	0.1
713	Hire of machinery and equipment	12	0.1
40100A	Electricity and distribution of electricity	30	0.3
7220EG	Computer systems/software produced on own account	63	0.7
744	Advertising services	64	0.7
743	Technical testing and analysis	74	0.8
748	Other business services	100	1.1
5A-C	Trade Margin etc.	124	1.4
742	Architectural and technical consultancy	231	2.5
741	Legal and business consultancy	232	2.6
7020A	Other real estate letting	564	6.2
63210A	Parking services	576	6.3
63230	Other supporting air transport activities	6979	76.9
Total		9073	100.0

##### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

##### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### 3.15.4.5 SNI 63.30 Tour operators and travel agencies

##### *Output*

The output value is obtained from the business statistics.

**Table 34 Data on the output value SNI 63.30**

Product group	Description	2005 SEK million	Percentage weighting
713	Hire of machinery and equipment	11	0.0
7020A	Other real estate letting	15	0.1
71100A	Car benefits	23	0.1
5A-C	Trade Margin etc.	31	0.1
6021A	Passenger transport (public transport)	44	0.2
7220EG	Computer systems/software produced on own account	71	0.2
741A	Licence, patent and royalty services	74	0.3
748	Other business services	97	0.3
72500	Maintenance and repair of office and accounting machinery	103	0.4
6330A	Other travel organising and tourist assistance activities	3359	11.6
63301	Package tours by air and bus, domestic and foreign	25144	86.8
Total		28972	100.0

The output value for the arrangement of travel covers the commissions received in the course of the intermediation activity. On the other hand, the whole amount paid by the customer is contained in the output value for package tours and tourist services. Apart from the business statistics, a special SCB inquiry on enterprises in the travel business in 2002 has been used to calculate the output value and its allocation to product groups.

Economic information is collected gross for travel agencies and the net amount is compiled by the producers of the SBS in close co-operation with the national accounts. The company profiling group has also been involved in this work, making special comparisons between different sources of information.

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### *3.15.4.6 SNI 63.40 Other transport agency services*

##### *Output*

The output value is obtained from the business statistics. The industry covers forwarding agents and haulage terminals.

**Table 35 Data on the output value SNI 63.40**

Product group	Description	2005 SEK million	Percentage weighting
713	Hire of machinery and equipment	30	0.0
71100A	Car benefits	143	0.1
71210	Hire of other land transport equipment without driver	100	0.1
7220EG	Computer systems/software produced on own account	97	0.1
741	Legal and business consultancy	88	0.1
741A	Licence, patent and royalty services	77	0.1
7020A	Other real estate letting	148	0.2
5A-C	Trade Margin etc.	200	0.2
142	Sand, gravel, rock and clay	260	0.3
63110	Cargo handling	611	0.6
63120	Storage and warehousing	1659	1.7
60240	Road transport, goods	2721	2.8
63400	Other transport agency services	92457	93.8
Total		98591	100.0

The output values for forwarding are calculated gross.

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

### **3.15.5 SNI 64 Post and telecommunications**

#### *3.15.5.1 SNI 64.10 Post and courier services*

#### *Output*

The output value is obtained from the business statistics and is allocated to the following product groups:

**Table 36 Data on the output value SNI 64.10**

Product group	Description	2005 SEK million	Percentage weighting
7020A	Other real estate letting	27	0.1
71100A	Car benefits	34	0.1
744	Advertising services	21	0.1
713	Hire of machinery and equipment	44	0.2
5A-C	Trade Margin etc.	43	0.2
222	Printing products	71	0.3
7220EG	Computer systems/software produced on own account	94	0.4
741	Legal and business consultancy	178	0.7
60240	Road transport, goods	1305	5.0
641	Post and courier activities	24256	93.0
Total		26073	100.0

In recent years the industry has undergone a number of reclassifications. As of 1994 the Swedish Postal Giro Centre (FISIM) was reclassified in Financial intermediation, SNI 65. In 1998 the haulage activity of the postal service was reassigned to SNI 60.24 Freight transport by road. In 1996 the forwarding activity of the postal service was reassigned to Other transport agency services, SNI 63.40, but in 1998 reverted to the postal services industry.

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

#### *3.15.5.2 SNI 64.20 Telecommunications*

##### *Output*

The main source for the calculations is the structural business statistics. Apart from the business statistics, an annual SCB inquiry on enterprises in the telecommunications industry is also available. The inquiry in 2005 covered 441 enterprises and the response rate was approximately 82 % counted on the basis of the number of enterprises. It was mainly the small enterprises which did not respond and the response rate weighted with turnover was approximately 99 %. The inquiry is used chiefly in order to calculate the output value broken down by product groups. The output value is allocated to the following product groups:

**Table 37 Data on the output value SNI 64.20**

Product group	Description	2005 SEK million	Percentage weighting
72A	Other data processing services	61	0.1
713	Hire of machinery and equipment	50	0.1
7020A	Other real estate letting	189	0.2
71100A	Car benefits	152	0.2
741A	Licence, patent and royalty services	370	0.4
5A-C	Trade Margin etc.	346	0.4
748	Other business services	787	0.9
742	Architectural and technical consultancy	1123	1.2
64203	Cable services, television and radio services	2488	2.8
7220EG	Computer systems/software produced on own account	2721	3.0
64202	Broadcasting services, television and radio transmission	2973	3.3
64201B	Mobile telephony	27554	30.7
64201A	Telecommunications services excluding mobile telephony	51084	56.8
Total		89898	100.0



### *Intermediate consumption*

Intermediate consumption is obtained from the structural business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

## **3.16 Financial intermediation, NACE J, SNI 65-67**

**Table 38 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH						Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	Benchmark Extrapolation and models	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M		
								Total Extrapolation +Models		
Output		140535						12070	12070	152605
IC		51177						5712	5712	56889
GVA	0	89358	0	0	0	0	0	6358	6358	95716
		Adjustments						Final		
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing		estimate		
Output	152605	-42	4318		353			157234		
IC	56889		-6417			186		50658		
GVA	95716	-42	10735	0	353	-186		106576		

Administrative records refer to annual reports

Other models refer to the FISIM compilations

Data validation refer to an incorrectly registered item.

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustiveness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

Financial intermediation is pursued mainly by enterprises in the financial corporations sector falling within the following industries:

SNI 65 Financial intermediation, except insurance and pension funding

SNI 66 Insurance and pension funding, except compulsory social security

SNI 67 Activities auxiliary to financial intermediation

### **3.16.1 SNI 65 Financial intermediation, except insurance and pension funding**

The sector comprises the institutional groups: banks, credit market enterprises, securities corporations, mutual funds, fund corporations and investment corporations. All except investment corporations are under the supervision of the Swedish Financial Supervisory Authority.

#### *Banks*

In 2005 there were 122 banks established in Sweden; 29 banking corporations, 20 foreign-owned subsidiaries, 2 co-operative (member banks) and 71 independent saving banks.

The independent saving banks are generally small and only active in the local or regional market. The four largest banks in Sweden in 2005 accounted for 80 percent of the balance

sheet total of the banking sector, SEK 4 583 billion. In 1998 the same share was 85 percent.

### *Credit market enterprises*

In statistical terms credit market enterprises are usually divided into housing credit institutions, finance corporations and companies that offer financing to corporations and municipalities. In 2005 there were 8 housing credit institutions (compared to 13 in 1998) who accounted for 72 percent of the balance sheet total of credit market enterprises, which in 2005 was SEK 2 280 billion.

There are 52 finance corporations who mainly are devoted to factoring, promissory note credit, and leasing and account card business.

During 2005 credit market enterprises accounted for 51 percent of total loans to the public. Housing credit institutions accounted for 40 percent of these. Consequently the share of the banks in total loans to the public was 49 percent.

The assets in *Mutual funds* amounted at the close of 2005 to SEK 1 161 billion. During 2005 approximately 72 percent of the Swedish population had some of their private savings in mutual funds. Mutual funds may be equity funds, bond and money market funds, mixed funds or other funds.

*Investment corporations* belong to the financial sector and are surveyed by Statistics Sweden. They are not supervised of the Financial Supervisory Authority. The statistics cover all enterprises quoted on the Stock Exchange as well as subsidiaries, which manage shares or transact business in shares. In 2005 a total of 23 companies were surveyed (in 1998 the same figure was 28). In 2005 the total financial assets in Swedish investment corporations were SEK 256 billion.

The quantity of *Securities corporations* added at the close of 2005 up to 112. Securities business may be conducted by Swedish public limited companies, banking institutions and foreign enterprises on authorisation from the Financial Supervisory Authority.

### *Statistical sources*

Enterprises belonging to SNI 65, which are under the supervision of the Financial Supervisory Authority, respond to an annual survey submitting their profit and loss accounts and balance sheets and specifications based on final accounts statistics. The results are used by Statistics Sweden, the Riksbank and the Financial Supervisory Authority. One a yearly basis Statistics Sweden compiles the profit and loss account and balance sheet data for each institutional group. The statistics are published at Statistics Sweden's webpage. Investment corporations are questionnaire-surveyed by Statistics Sweden. The balance sheet data with specifications are collected quarterly.

### *Output*

The output of credit institutions and investment corporations consists of FISIM, product group 65A, and what is referred to in the profit and loss account as commissions etc., product group 65B.

For information about FISIM see chapter nine.

The item “Commissions etc” in the survey form consists, on the one hand, of direct charges, for example, for the hire of bank safe-custody boxes, overdraft fees, late payment penalties, advice commissions, management charges, currency conversion charges, and, on the other hand, of indirect charges such as fund accumulation charges. The commissions are calculated on banks, credit market enterprises, securities corporations, mutual funds, fund corporations and investment corporations.

The output value is allocated to the following product groups:

**Table 39 Data on the output value SNI 65**

Product group	Description	2005 SEK million	Percentage weighting
713	PC	4	0.0
71100A	Car benefits	163	0.2
7220EG	Computer systems/software produced on own account	2 431	2.3
65B	Banking services & other financial intermediation	38 237	35.5
65A	FISIM	66 835	62.1
		107 670	100.0

#### *Intermediate consumption*

The basis for the calculation of intermediate consumption is formed by the operating costs stated by the institutions themselves. These are subsequently corrected for compensation of employees, insurance, leasing and software and certain investment in order to arrive at total intermediate consumption in conformity with the national accounts definition.

**Table 40 Data on the intermediate consumption SNI 65**

Description	2005 SEK million	Percentage weighting
Insurance adjustment	-39	-0,1
Leasing	-99	-0,3
Adjustment	124	0,4
PC	-339	-1,0
Product taxes	-484	-1,4
Computer software	-2 870	-8,5
Operating costs SNI 65	37 554	111,0
Total	33 848	100

#### *Value added*

Value added is obtained residually as the difference between output and intermediate consumption, 107 870-33 848=73 822 mSEK.

### **3.16.2 SNI 66 Insurance and pension funding, except compulsory social security**

Insurance services consist of life insurance, product group 6601, pension funding 6602, for which the employer usually pays the premiums, non-life insurance 66030A, and reinsurance, 66030B. Insurance services are provided by traditional life insurance companies, unit-linked companies, national and local non-life insurance companies and friendly societies (tjänstepensionskassor). They are all subject to supervision by the Financial Supervisory Authority. The output of PPM, who manages the premium pension

system, and PRI Pensionstjänst AB is also part of SNI 66. PRI administers non-autonomous pension funds.

The so-called national companies provide country-wide coverage and during 2005 there were 126 active. Throughout the same period there were also 231 small local companies operating in the market. The largest of these insurance companies are made up of pension funds with group insurance activity. The market is dominated by a few larger groups. The five largest insurance companies in 2005 accounted for 81 percent of the non-life insurance market and 80 percent of the life insurance market.

Life insurance companies can be divided into traditional life insurance and unit-linked insurance. The traditional life insurance companies pay a guaranteed return and provide both private and group insurance solutions. The majority of group insurances, however, are concentrated in the hands of a few large companies.

Unit-linked companies manage pension insurance arrangements under which the policyholder himself chooses the direction for the investment of the funds. Consequently the yield is determined by the performance of the individual funds. These consist mostly of individual private pension policies. There are also a number of group pension arrangements. These provide group pension solutions for employees covered by a collective agreement, which entitles the individual concerned to invest part of the accrued pension rights himself.

Non-life insurance companies covers sickness and accident insurance, redundancy insurance, industrial injury cover, as well as property insurance. Working individuals can also sign for additional cover in the event of sickness and occupational injury through group insurance policies

Friendly societies provide occupational pension fund services and are benevolent societies.

#### *3.16.2.1 Statistical sources*

The main statistical source is the profit and loss accounts and balance sheets collected by the Swedish Financial Supervisory Authority. The accounts are set up in accordance with "The annual accounts and consolidated accounts of insurance undertakings" Council directive 91/674/EEC.

Data on import and export of insurance services, premiums and claims, are gathered and calculated by using International Trade in Service statistics compiled for the Swedish Balance of Payments. This information is also used to calculate reinsurance services.

#### *3.16.2.2 Output*

This section only applies to domestic insurance services, i.e. production for export is calculated separately and from the use side. Domestic insurance services produced are separated from total production by separation of the risks. Domestic output of insurance services is calculated on Swedish risks.

**Table 41 Data on the output value SNI 66**

Product group	Description	2005 SEK million	Percentage weighting
71100A	Car benefit	67	0,2
741	Legal, accounting	107	0,3
7220EG	Computer systems/software produced on own account	1 096	3
66030B	Reinsurance	2 844	7,5
6601	Life insurance	4 226	12
66020	Pension fund services	5 220	14
66030A	Non-life insurance	23 173	63
Total		36 733	100

### 3.16.2.2.1 Life insurance

Statistics Sweden uses the sum of cost approach when estimating the output, service charge, of life insurance. There are two reasons for this approach. The first reason is that Swedish life insurance companies are often mutual companies. If they are not, the majority are run according to mutual principles. If they are allowed to make profits, the profits come mainly from holding gains. The output or service charge of insurance companies that makes no profit equals the operating expenses. Some labour market insurances, which comprise a large proportion of the total services produced in Sweden, are not exposed to competition. The companies providing these services are mutually owned by the large employer organisations and employee organisations.

The second and most important reason for the sum of costs approach is the difficulty of excluding holding gains/losses from the output. Preliminary calculations of the output of life insurance companies made at the time of transition from ESA 79 to ESA 95 showed a volatility of up to 50 percent per year for a series of years.

Operating expenses are defined as:

- Commissions
- Other acquisition costs
- Change in deferred acquisition costs
- Administrative expenses
- Reinsurance commissions and profit participation

**Table 42**

	Operation- expenses	Claims/settle ments costs	Private life assurance and pension insur.		Pension funding	
	Mnkr	Mnkr	Share %	Mnkr	Share %	Mnkr
Individual insurance, life	2049	48	90%	1887	10%	210
Individual insurance, unit-linked life	1753	20		1773		
Group insurance, group pension	44	1		45		
Group insurance, group life	468	54		522		
Group insurance, occupational pension	2884	184				3068
Group insurance, service group life insurance	129	30				159
Group insurance, unit-linked life	957	4				961
AFA Insurance	142					142
Friendly societies, operation expenses	225	37				262
PRI, FPG - Pension service and Pension guarantee, oper.exp.	166					166
PPM - Premium Pension Authority, oper. expenses	252					252
<b>Total</b>				<b>4227</b>		<b>5220</b>

It is the cost of acquiring new, renewal of existing policies and administrative expenses that is measured in the source data. Claims management costs and investment management charges are therefore excluded. However, in the sum of costs approach, claims management costs are added to operating expenses. Investment management charges and other technical charges are not included and hence no correction for interest payable is necessary. Operating expenses are not corrected for reinsurance commissions and profit participation in ceded reinsurance in Swedish National Accounts due to the output algorithm used for reinsurance services.

By applying the sum of costs approach there is no problem with excluding holding gains/losses in the change of reserves as long as premium supplements are net of holding gains/losses.

ESA95 § 3.63: Output of insurance services = Premiums + premium supplements – claims – change in reserves.

ESA95 § 4.142: Change in reserves = Contributions + contribution supplements – service charge(\*) – benefits.

(\*) Service charge is equal to operating expenses, as insurance companies are not allowed to make any profit.

Output of insurance services = Premiums + premium supplements – claims –  
(Contributions + contribution supplements – service charge – benefits) = Service charge

The premium supplement is calculated as the net investment income (net operating surplus) on land and buildings, dividends and net interest income.

#### *Exports and imports of life insurance services and cross border flows*

Life insurance services, service charge, in the International Trade in Service statistics are calculated using data on premiums. A proportion, service ratio, of the premium inflow cover the service charged, i.e. exports, and the rest is other current transfers. Imports are calculated in the same way. The proportion, currently 11 percent, is calculated using data

from the Swedish Insurance Federation and applied to both directions. Exports of life insurance services amounted to 151 million SEK in 2005 and imports were 77 million.

#### *3.16.2.2.2 Non-life insurance*

The output, service charge, of non-life insurance is measured in accordance to ESA95 § 3.63. The main components: *Premiums, Premium supplements Claims and Change in technical provisions* in the source material provided by the Swedish Financial Supervisory Authority are described below.

##### *Premiums*

The starting point is the gross premiums as defined in Council directive 91/674/EEC article 35. Gross premiums written are deducted with outward reinsurance premiums and the change in provisions for unearned premiums and unexpired risks and results in premiums earned. The latter is net of the change of reinsurer's share of unearned premiums. The change in unearned premiums is net of portfolio transfers and exchange rate fluctuations. The change in provisions for unexpired risks are entered into the accounts with a negative sign (if increase).

Provisions for unexpired risks are entered into the balance sheet together with provisions for unearned premiums. In the technical account the opening balance of unearned premiums and unexpired risks are entered with a positive sign. The closing balance of unearned premiums and unexpired risks are displayed separately with negative signs. This explains the deviation from the recommendation of the Task Force on Insurance Measurement Eurostat/B1/CPNB/336 Rev. 1. The closing balance of the provisions for unexpired risks was 506 million SEK in 2004 and 99 million in 2005.

Gross premiums are entered net of rebates in the source data. Premiums earned are at present not corrected for the change in provisions for bonuses and rebates as recommended by the Task Force on Insurance Measurement. This corresponds to the change in item C.4 91/674/EEC article 6. The closing balance of the provisions for bonuses and rebates risks was 302 million SEK in 2004 and 1224 million in 2005.

##### *Premium supplements*

Premium supplements are recorded as described above for life insurance. Income earned by the investment of own funds are excluded by applying recommendation 2 of the Task Force on Insurance Measurement. It should be noted that profit or loss in the financial year are included in capital and reserves according to Swedish accounting rules.

##### *Claims*

Claims paid are calculated in accordance to article 38 of Council directive 91/674/EEC. Claims incurred, net of reinsurance are gross claims paid net of reinsures share of claims paid minus the change in provisions for claims outstanding, net of reinsurance. Claims management costs and change in provisions for claims management costs are excluded. As for premiums, claims are net of the change in provisions for claims outstanding due to portfolio transfers and exchange rate fluctuations.

In motor third-party liability insurances claims paid are often annuities. Annuities are included in claims incurred and therefore change in provisions for annuities, which is a part of provisions for outstanding claims, is withdrawn from claims paid.

Equalisation provisions are at present not included in the output algorithm. They are not part of provisions for claims outstanding but are part of AF.62. Statistics Sweden intends to follow the recommendations of the Task Force on insurance measurement and adding the change in equalisation provisions to claims incurred. The change in equalisation provisions was 44 million SEK in 2005.

#### *Change in technical provisions*

Change in other technical provisions, net of reinsurance, not shown under other headings equals to 0,1 million SEK in 2005.

#### *Exports and imports of non-life insurance services and cross border flows*

Exports of non-life insurance services are calculated in the same way as for life insurance services. Income is not attributed to foreign policyholders nor is there an estimate of income earned on domestic assets abroad. The service ratio is 24 percent for freight insurance and 25 percent for other direct insurance. Exports of life non-life insurance services amounted to 3 029 million SEK in 2005 and imports was 398 million.

#### *3.16.2.2.3 Reinsurance*

Reinsurance services are recorded using International Trade in Service statistics. As for direct insurance the data ignores premium supplements. The service ratio is 34 percent. Reinsurance commissions are recorded as negative operating expenses for direct insurers. Reinsurance commissions are recorded in data provided by the Swedish Supervisory Authority. For Statistics Sweden to be able to follow the recommendations of the Task Force on insurance measurement, an alteration of the output algorithm for reinsurance services is necessary. One possible solution is to calculate reinsurance services as premiums, net of reinsurance commissions, less claims. Exports of reinsurance services amounted to 2 844 million SEK in 2005 and imports was 2 091 million. All domestic use of reinsurance services is imported.

#### *3.16.2.3 Intermediate consumption*

The intermediate consumption is calculated as a residual with depreciation and labour costs deducted from operating expenses and claims management costs. Investment management charges and other technical charges are ignored at present. Reinsurance commissions and profit participation in ceded reinsurance are not withdrawn from operating expenses.

#### *3.16.2.4 Allocation of output by users*

The output of life insurance services, unless exported, is consumed by households as final consumption. For non-life insurance output is calculated for the different groups of classes, product. The uses, i.e. household final consumption or intermediate consumption, of each product are then identified. The identification of uses is non-complicated for the majority of products. These products have a final consumption to total output ratio of 0 or 100 in the table below. For home and house insurance, motor vehicle insurance, motor



third party insurance, marine insurance and animal insurance a split between final and intermediate consumption has to be made.

Household final consumption of total output of non-life insurance, percent	
Health and accident insurance	100
Employers no-fault insurance	100
Home and house insurance	40
Company and real estate insurance	0
Motor vehicle insurance	63
Motor third party insurance	63
Marine insurance	20
Aviation insurance	0
Transport insurance	0
Credit insurance	0
Discharge insurance	100
Animal insurance	5

For the governments intermediate consumption a method similar to exports of insurance services is used. The value of government intermediate consumption of non-life insurances is measured as a proportion, 26 percent, of the insurance premiums paid. There is no information on which insurance product local and central government are buying so the approach has to be general.

The intermediate consumption of NPISH is extrapolated using a benchmark from 1995.

**Table 43 Data on the intermediate consumption SNI 66**

Description	2005	Percentage weighting
	SEK million	
Leasing	0	0,0
Insurance adjustment	-18	-0,2
Adjustment	41	0,4
PC	-174	-1,6
Product taxes	-396	-3,6
Computer software	-1 999	-18,0
Operating costs in SNI 66	13 623	123,0
Total	11 077	100

#### *Value added*

Value added is obtained residually as the difference between output and intermediate consumption, 36 733-11 077=25 656.

### **3.16.3 SNI 67 Activities auxiliary to financial intermediation**

Activities auxiliary to financial intermediation are defined as activities, which are closely related to financial intermediation but are not financial intermediation as such.

SNI 67 consists of several large enterprises engaging in the above-mentioned activity. For example Swedish Securities Register Centre, the Stockholm Stock Exchange, the Plusgiro and Forex. It also consists of self-employed insurance brokers, insurance brokers in corporate form, securities corporations, foreign exchange businesses and fund corporations. Some of the enterprises are subject to supervision by the Financial Supervisory Authority.

### Output

The output calculations for SNI 67 are model-based. The model uses the assumption that the production in SNI 67 closely follows the output of companies engaged in financial intermediation as the population mainly consists of brokers and other financial actors. The output of SNI 67 is calculated as the weighted average of the development in SNI 65 (excluding FISIM) and SNI 66.

The output value is allocated to the following product groups:

**Table 44 Data on the output value SNI 67**

Product group	Description	2005 SEK million	Percentage weighting
741A	Licence, patent and royalty	2	0
713	PC	3	0
71100A	Car benefit	82	0,5
67	Underground production	353	3
7220EG	Computer systems/software produced on own account	363	2,5
67	Activities auxiliary to financial intermediation	12 028	94
Total		12 831	100

### Intermediate consumption

The development of the output in SNI 67 is used to calculate the intermediate consumption.

**Table 45 Data on the intermediate consumption SNI 67**

Description	2005 SEK million	Percentage weighting
Adjustment	21	0,4
Intermediate consumption	5 712	99,6
Total	5 733	100,0

### Value added

Value added is obtained residually as the difference between output and intermediate consumption, 12831-5733=7098.

## 3.17 Real estate, renting and business activity, NACE K, SNI 70-74

**Table 46 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH					Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	Benchmark	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M	Total Extrapolation +Models
Output	0	0	613426	0	0	0	269608	1201	270809
IC	0	0	344390	0	0	0	73945	3074	77020
GVA	0	0	269036	0	0	0	195663	-1873	193789
		Adjustments						Final	
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing		estimate	
Output	884235	-1836	9380	0	8546	0	900325		
IC	421410	-1434	2911	0	-13552	1500	410835		
GVA	462825	-402	6469	0	22098	-1500	489490		

Combined data refer to SBS

Extrapolation and models refer to the special calculations of dwellings

Data validation refers to financial transactions wrongly recorded in the source material.

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustiveness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

### 3.17.1 Real estate activity, SNI 70

In the Swedish national accounts SNI 70 is subdivided into three industries. New estimates are compiled each year for each of the sub-groups.

1. Own homes and holiday/weekend homes (part of SNI 70.2).
2. Other real estate management, which includes apartments in multiple-occupancy buildings and letting of premises (part of SNI 70.2).
3. Use and buying and selling of own real estate plus real estate intermediation and real estate management on a fee or contract basis (SNI 70.1 and 70.3).

#### *Output*

The output value is allocated to the following product groups:

**Table 47 Data on the output value SNI 70**

Product group	Description	2005 SEK million	Percentage weighting
71100A	Car benefit	270	0,1
741A	Licence, patent and royalty services	221	0.1
742	Tech. serv.	117	0.1
45	Construction	761	0.2
741	Business serv.	1323	0.3
70201B	Holiday home	13940	3,3
70A	Real estate intermediation etc.	28197	6.7
70201C	Apartments in mult.-occ. buildings	105083	24.9
7020A	Letting of premises	117702	27.9
70201A	Own home	153116	36.4
Total		421196	100

#### *Apartments in multiple-occupancy buildings*

##### **Tenancies in multiple-occupancy buildings**

The output value covers rental income in respect of tenancies in multiple-occupancy buildings, excluding heating costs. The value is calculated by the help of the dwelling area according to the national estate taxation register and rent per square metre according to annual information on rents from the survey Rents for dwellings (HiB). Regional stratification is used in the calculations, as well as stratification on year of construction and on dwelling size. Strata contain four regions, 10 construction periods and 6 different dwelling sizes. Heating costs are deducted according to the calculations made in the comprehensive energy balances. A deduction is also made for empty dwellings according to the estimates of an annual SCB survey.

Because the available information on rental income relates to rental including heating costs, the rental for heated accommodation is calculated first. Rental for accommodation without heating is obtained residually as heated-accommodation rental less heating cost. The heating cost is calculated in a model based on Statistics Sweden's annual inquiry on the supply of electricity, gas and district heating (see source description, section 11).

#### **Multiple-occupancy buildings, tenant-ownership rights**

A holder of a tenant-ownership entitlement does not own his apartment but owns a share in a tenant-owners' association. The task of the tenant-owners' association is to ensure the day-to-day maintenance of the property etc. For this the tenant-owner pays a charge. This charge is lower than corresponding rentals in the case of ordinary tenancies. Hence the rental cost for tenant-ownership rights is estimated by using the rental cost per square metre for ordinary tenancies of a corresponding standard. Otherwise the calculation is carried out on the same principles as for tenancies in multiple-occupancy buildings.

#### **Owner occupied dwellings**

In accordance with international recommendations, a utility value is to be estimated for the residence of a person in his own home. Thus it is not the expenditure of households living in their own home, which is calculated, but instead an alternative cost indicating how much they would have paid if they had rented the accommodation. In Sweden it is not usual for individual houses to be let, hence there is no basis for estimating the utility value with the aid of actual rental costs for single-family houses. Instead the level is ascertained with the aid of rental costs per square metre in multiple-occupancy buildings of a corresponding standard, i.e. similar apartment size, region and age. A supplement is also included for access to a garage.

In the same way as for multiple-occupancy buildings, the number of individual houses is based on the national estate taxation register. Rentals for garages, taken from the survey Revenues and expenditure of multi-dwelling buildings (IKU), and average area and rental per square metre, collected from the HiB and HEK, make up the total value. The calculation is stratified by region, year of construction and apartment size.

The rental for unheated accommodation is obtained residually as the heated-accommodation rental minus heating cost. Since the utility right is defined as corresponding to the rental for tenanted apartments, the unheated-accommodation rental is calculated by subtracting the heating cost per square metre from the heated-accommodation rental for the rented apartment.

#### **Holiday/weekend homes**

For holiday and weekend homes the utility value is calculated as the sum of costs at current prices for services (refuse collection, water and chimney-sweeping), insurance services, repairs and maintenance, FISIM, real estate tax, consumption of fixed capital and net operating surplus. The net operating surplus is measured by applying a real rate of return of 2.5% to the value of the stock at current prices. The service charges are calculated by extrapolating the household budget data from HBS-92. Insurance expenses on individual houses and holiday/weekend are calculated annually based on insurance and taxation data. The share of holiday and weekend homes of the total insurance services for owner-occupiers is estimated with the aid of the corresponding tax assessment value for holiday homes. Repairs and maintenance are obtained from calculations taking the housing and rental survey (HIB) as its source. Consumption of fixed capital is calculated from the figures for stocks of fixed assets. Holiday/weekend homes owned by foreigners

are also included in the estimates, as information is gathered from the total national register which contains all units. Foreigners can however be separated by the help of address information.

**Other real estate management**

Other real estate management consists, on the one hand, of the premises and garage spaces belonging to apartments classed as rented residential accommodation and, on the other hand, of the commercial letting of shop premises, offices and industrial premises. Source: business statistics.

**Real estate intermediation etc.**

The output value consists of land use, buying and selling of own real estate, real estate intermediation and management under contract or for a fee. Source: business statistics.

*Intermediate consumption*

**Own homes and holiday/weekend homes**

Intermediate consumption includes costs for refuse disposal, repairs, insurance, ancillary financial services and public services. On the other hand, fuel for heating is not included since the output value is calculated exclusive of fuels. The value is based mainly on data from HBS. Balancing and plausibility assessment are performed in the supply and use tables.

**Multiple-occupancy buildings, other real estate management and real estate intermediation**

Intermediate consumption is based on the business statistics. Fuel is not included for multiple-occupancy buildings since output is calculated exclusive of fuel. Balancing and plausibility assessment are performed in the supply and use tables.

*Value added*

Value added for these activities is obtained as the difference between output value and intermediate consumption value.

**3.17.2 SNI 71 Hire/leasing of vehicles and machinery etc.**

*Output*

The industry consists of enterprises whose main activity comprises leasing or the supply for hire of vehicles and machinery without crew or operators and of household articles and goods for personal use. The industry's output is obtained from the Structural Business Statistics. The composition of the output value for 2005 is shown in the table below:

**Table 48 Data on the output value SNI 71**

Product group	Description	2005 SEK million	Percentage weighting
7020A	Other real estate letting	35	0.1
7220EG	Computer systems/software produced on own account	34	0.1
741	Legal and business consultancy	18	0.1
71100A	Car benefits	49	0.2
741A	Licence, patent and royalty services	81	0.3
71220	Hire of ships and boats without master	248	1.0
5A-C	Trade Margin etc.	522	2.2
71230	Hire of aircraft without crew	1226	5.2
7140	Hire household articles/goods for personal use	2124	9.0
71210	Hire of other land transport equipment without driver	2640	11.2
71100	Motor vehicle hire (cars and vans)	3620	15.3
713	Hire of machinery and equipment	13065	55.3
Total		23662	100.0

*Intermediate consumption*

Intermediate consumption is also obtained from the Structural Business Statistics. Balancing and plausibility assessments of the inputs are performed in the supply and use tables.

*Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

**3.17.3, SNI 72 Data processing activity etc***Output*

The industry's output value is obtained from the Structural Business Statistics. The output value covers IT consultancy activity, data processing, database activity etc., and is allocated to product groups according to the table below. A supplement to the output value is included, inter alia, for service activities belonging to industrial enterprises and for inventories. The inventory item consists of products undergoing manufacture and work in progress.

**Table 49 Data on the output value SNI 72**

Product group	Description	2005 SEK million	Percentage weighting
742	Architectural and technical consultancy	24	0.0
7020A	Other real estate letting	103	0.1
804	Adult and other education	155	0.1
30020	Computers and other data processing equipment	369	0.3
71100A	Car benefits	782	0.6
713	Hire of machinery and equipment	1438	1.0
741	Legal and business consultancy	1758	1.3
5A-C	Trade Margin etc.	2232	1.6
7220EG	Computer systems/software produced on own account	3484	2.5
72500	Maintenance and repair of office and accounting machinery	3964	2.9
741A	Licence, patent and royalty services	5196	3.8
72A	Other data processing services	38399	27.9
7220	Computer system and software consultancy	79769	57.9
Total		137673	100.0

*Intermediate consumption*

The Structural Business Statistics also provide information concerning the industry's intermediate consumption. Balancing and plausibility assessments are performed in the supply and use tables.

*Value added*

Value added is obtained as the difference between the output value and intermediate consumption.

**3.17.4 SNI 73 Research and development***Output*

The output value is obtained from the Structural Business Statistics. The calculations include, amongst other things, a supplement for work-in-progress and for production of these services by service activity units belonging to industrial enterprises. The table below shows the distribution of the output value for 2005.

**Table 50 Data on the output value SNI 73**

Product group	Description	2005 SEK million	Percentage weighting
741	Legal and business consultancy	35	0.1
713	Hire of machinery and equipment	24	0.1
71100A	Car benefits	68	0.3
7220EG	Computer systems/software produced on own account	103	0.4
24420	Medicines	192	0.7
741A	Licence, patent and royalty services	278	1.1
73	Research and development	12039	45.5
5A-C	Trade Margin etc.	13723	51.9
Total		26462	100.0

### *Intermediate consumption*

Intermediate consumption is also obtained from the Structural Business Statistics. Balancing and plausibility assessments are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between the output value and intermediate consumption.

## **3.17.5 SNI 74 Other business services**

### **Output**

The industry is subdivided in the Swedish national accounts and calculations are made separately for four sub sectors: SNI 74.10, Legal and Accounting Services; SNI 74.20-30, Architectural and Technical Services; SNI 74.40, Advertising and Market Research; and SNI 74.50-80, Other Business Services. Similarly to most other industries, the level of output and intermediate consumption is obtained from Structural Business Statistics. These values are subsequently adjusted in accordance to the description in section 3.3.

### **3.17.5.1 SNI 74.10 Legal and Accountancy Services**

#### *Output*

The output value for legal and accountancy services was, for 2005, distributed as follows:

**Table 51 Data on the output value SNI 74.10**

Product group	Description	2005 SEK million	Percentage weighting
246	Other chemical products	8	0.0
281	Structural metal products	11	0.0
29550	Machinery for pulp, paper and paperboard production	5	0.0
29569	Miscellaneous other special machinery	5	0.0
32100	Electronic components	12	0.0
293	Agricultural and forestry machinery	58	0.1
7020A	Other real estate letting	162	0.2
713	Hire of machinery and equipment	134	0.2
741A	Licence, patent and royalty services	263	0.3
5A-C	Trade Margin etc.	232	0.3
804	Adult and other education	357	0.4
7220	Computer system and software consultancy	508	0.6
71100A	Car benefits	886	1.0
7220EG	Computer systems/software produced on own account	957	1.1
741	Legal and business consultancy	83278	95.9
Total		86876	100.0

### *Intermediate consumption*

Intermediate consumption is obtained from the Structural Business Statistics. Balancing and plausibility assessments are performed in the supply and use tables.



### *Value added*

Value added is obtained as the difference between the output value and intermediate consumption.

#### *3.17.5.2 SNI 74.20-30 Architectural, Technical Services and Technical Testing*

### *Output*

The output value for architectural and technical services consists of the product groups architectural and technical consultancy, technical testing and licences. Supplements are included for work in progress and for service activity units belonging to industrial enterprises regarding the output of architectural and technical services.

**Table 52 Data on the output value SNI 74.20-30**

<b>Product group</b>	<b>Description</b>	<b>2005 SEK million</b>	<b>Percentage weighting</b>
28220	Central heating radiators and boilers	12	0.0
222	Printing products	39	0.1
3330000	Instruments for industrial process control	43	0.1
7020A	Other real estate letting	87	0.1
741A	Licence, patent and royalty services	99	0.1
713	Hire of machinery and equipment	91	0.1
221	Products from publishing activity	225	0.3
741	Legal and business consultancy	221	0.3
71100A	Car benefits	418	0.6
7220EG	Computer systems/software produced on own account	585	0.8
5A-C	Trade Margin etc.	686	0.9
743	Technical testing and analysis	6384	8.7
742	Architectural and technical consultancy	64598	87.9
Total		73488	100.0

### *Intermediate consumption*

Intermediate consumption is obtained from the Structural Business Statistics. Balancing and plausibility assessments are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between the output value and intermediate consumption.

#### *3.17.5.3 SNI 74.40 Advertising and Marketing*

### *Output*

The output value consists mainly of advertising services. Supplements are included for work in progress and for the service activity units of industrial enterprises regarding the output of advertising services. The industry is characterised by a relatively high level of intermediate consumption (high input coefficient). The output value for 2005 was as follows:

**Table 53 Data on the output value SNI 74.40**

Product group	Description	2005 SEK million	Percentage weighting
5A-C	Trade Margin etc.	12	0.0
741A	Licence, patent and royalty services	47	0.1
713	Hire of machinery and equipment	31	0.1
71100A	Car benefits	178	0.4
7220EG	Computer systems/software produced on own account	199	0.5
741	Legal and business consultancy	612	1.4
221	Products from publishing activity	828	1.9
744	Advertising services	41142	95.6
Total		43049	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the Structural Business Statistics. Balancing and plausibility assessments are performed in the inputs in the supply and use tables.

*Value added*

Value added is obtained as the difference between the output value and intermediate consumption.

*3.17.5.4 SNI 7450-80 Other Business Services**Output*

The industry comprises many small enterprises and produces a multitude of different services, such as labour recruitment and provision of personnel, security activities, cleaning and chimney sweeping. Supplements are included for informal activity and work in progress. An adjustment is made both for service activity units belonging to industrial enterprises and for industrial activity units of service enterprises. The table below shows the break-down of the output value for 2005 among product groups:

**Table 54 Data on the output value SNI 74.50-80**

Product group	Description	2005 SEK million	Percentage weighting
221	Products from publishing activity	7	0.0
741A	Licence, patent and royalty services	91	0.1
7020A	Other real estate letting	200	0.2
713	Hire of machinery and equipment	140	0.2
71100A	Car benefits	246	0.3
7220EG	Computer systems/software produced on own account	399	0.5
741	Legal and business consultancy	644	0.7
746	Investigation and security activities	8698	10.0
745	Labour recruitment and provision of personnel	15832	18.2
747	Cleaning and chimney-sweeping	21357	24.6
748	Other business services	39224	45.2
Total		86838	100.0

### Intermediate consumption

The Structural Business Statistics provide information on the industry's intermediate consumption. Balancing and plausibility assessments are performed in the supply and use tables.

### Value added

Value added is obtained as the difference between the output value and intermediate consumption.

## 3.18 Public administration and defence, compulsory social security, NACE L, SNI75

**Table 55 Process table of market and non-market output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH					Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M		
				Benchmark Extrapolatio and models			Total Extrap +Models		
Output	72625	138339				34739	21420	56159	267123
IC	41204	66822					20764	20764	126790
GVA	31421	71517	0	0	0	34739	656	35395	140333
	Adjustments							Final estimate	
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing			
Output	267123	-3674	687				264136		
IC	126790	-3674	1632				124748		
GVA	140333	0	-945	0	0	0	139388		

Surveys and censuses refer to summary accounts of local government

Administrative records refer to central government records

Extrapolation and models refer to NPISH

Data validation refer to incorrect recording of central government estimate

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

The compilation process is recorded in section 5.9.

## 3.19 Education, NACE M, SNI 80

**Table 56 Process table of market and non-market output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH					Other	Total
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M		
				Benchmark Extrapolatio and models			Total Extrap +Models		
Output	131466	26082	25293			6559	14182	20741	203582
IC	36404	9155	11182				9003	9003	65744
GVA	95062	16927	14111		0	6559	5179	11738	137838
	Adjustments							Final estimate	
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing			
Output	203582		539				204121		
IC	65744		-645		-649	36	64486		
GVA	137838	0	1184	0	649	-36	139635		

Surveys and censuses refer to summary accounts of local government  
 Administrative records refer to central government records  
 Combined data refer to SBS  
 Extrapolation and models refer to NPISH  
 Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM  
 Exhaustiveness refer to estimates for hidden activities  
 Balancing is the item used in the final consolidation process between production and expenditure sides.

Compilations of Non-market output is described in section 5.20

### *Market output*

The output value of market production is obtained from the Structural Business Statistics. Output includes all educational activities, which are pursued by corporate bodies or by individual entrepreneurs. The output value is mainly allocated to the product groups: primary education, secondary education, higher education and adult and other education (see table below).

**Table 57 Data on the output value SNI 80**

<b>Product group</b>	<b>Description</b>	<b>2005 SEK million</b>	<b>Percentage weighting</b>
555	Canteen, catering and central kitchen services	21	0.1
7220EG	Computer systems/software produced on own account	15	0.1
741A	Licence, patent and royalty services	14	0.1
853D	Individual and family welfare	16	0.1
713	Hire of machinery and equipment	32	0.1
5A-C	Trade Margin etc.	34	0.1
71100A	Car benefits	57	0.2
741	Legal and business consultancy	124	0.5
7020A	Other real estate letting	186	0.7
853A	Child care	176	0.7
803	Higher education	873	3.4
802	Secondary education	3562	14.0
801	Primary education	9199	36.2
804	Adult and other education	11088	43.7
Total		25397	100.0

### *Intermediate consumption*

Intermediate consumption is obtained from the Structural Business Statistics. Balancing and plausibility assessment are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

## 3.20 Health and social work, NACE N, SNI85

**Table 58 Process table of market and non-market output, intermediate consumption and gross value added, 2005, mSEK**

Added, 2003, index

	Basis for NA Figures		PRODUCTION APPROACH							
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models					Other	Total
				Benchmark Extrapolatio and models	CFM and ratios	CFC(PIM) & Imputed dw ellings	Other E&M	Total Extrap +Models		
Output	265697	18125	67435			8947	14069	23016		374273
IC	66862	5369	22850				10703	10703		105784
GVA	198835	12756	44585	0	0	8947	3366	12313	0	268489
		Adjustments					Final			
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing	estimate			
Output	374273		685		3306		378264			
IC	105784	30	-1019			81	104876			
GVA	268489	-30	1704	0	3306	-81	273388			

Surveys and censuses refer to summary accounts of local government

Administrative records refer to central government records

Combined data refer to SBS

Extrapolation and models refer to NPISH

Data validation refers to incorrect recording

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustiveness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

Compilations of Non-market output is described in section 5.9

### *Market output*

The industry includes all health and medical care etc. provided by corporate entities or by private entrepreneurs. A considerable proportion of the value of the industry represents social benefits in kind by the public sector, i.e. the purchase of care services by departments and agencies of general government. In the Swedish national accounts the industry is subdivided into three sub-industries: SNI 85.10, Health and medical care; SNI 85.20, Veterinary activities; and SNI 85.30, Welfare and social services. Similarly to most other industries, the level of output and intermediate consumption is obtained from Structural Business Statistics. In some cases the level of output had been adjusted for hidden activities (see chapter 7).

### **3.20.1 SNI 85.10 Health and medical care**

#### *Output*

Output in health and medical care includes all revenue accruing to the industry. In other words both the patient's fee, which the patient himself pays for a consultation, and purchases by government agencies of health and medical care form part of the output value. The output value is obtained from the business statistics and is allocated to the following product groups:

**Table 59 Data on the output value SNI 85.10**

Product group	Description	2005 SEK million	Percentage weighting
55A	Restaurant and bar services	22	0.0
7220EG	Computer systems/software produced on own account	8	0.0
741A	Licence, patent and royalty services	3	0.0
9272	Other recreational activities	2	0.0
5A-C	Trade Margin etc.	9	0.0
741	Legal and business consultancy	48	0.1
748	Other business services	51	0.1
926	Sporting activities	29	0.1
713	Hire of machinery and equipment	68	0.1
73	Research and development	116	0.2
803	Higher education	141	0.3
71100A	Car benefits	254	0.5
7020A	Other real estate letting	292	0.6
853B	Care of the elderly and disabled	1111	2.3
85140	Other human health activities	7206	15.0
851B	Medical practice activities	11903	24.7
85130	Dental practice activities	12172	25.3
851A	Hospital activities	14681	30.5
Total		48116	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

*Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

**3.20.2 SNI 85.20 Veterinary activities***Output*

For veterinary activities the output value is obtained from the Structural business statistics and is allocated to the following product groups:

**Table 60 Data on the output value SNI 85.20**

Product group	Description	2005 SEK million	Percentage weighting
741A	Licence, patent and royalty services	3	0.1
713	Hire of machinery and equipment	3	0.1
7020A	Other real estate letting	6	0.3
71100A	Car benefits	7	0.3
5A-C	Trade Margin etc.	16	0.8
85200	Veterinary activities	2074	98.3
Total		2109	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

## **3.20.3 SNI 85.30 Welfare and social services**

### *Output*

For welfare and social services the output value is obtained from the business statistics and is allocated to the following product groups:

**Table 61 Data on the output value SNI 85.30**

<b>Product group</b>	<b>Description</b>	<b>2005 SEK million</b>	<b>Percentage weighting</b>
55A	Restaurant and bar services	4	0.0
7220EG	Computer systems/software produced on own account	2	0.0
741	Legal and business consultancy	3	0.0
748	Other business services	2	0.0
551	Hotel services	18	0.1
555	Canteen, catering and central kitchen services	17	0.1
71100A	Car benefits	28	0.1
745	Labour recruitment and provision of personnel	24	0.1
802	Secondary education	30	0.1
801	Primary education	49	0.2
713	Hire of machinery and equipment	57	0.3
7020A	Other real estate letting	178	0.8
853A	Child care	902	4.3
853C	Pers. assistant	3601	17.2
853D	Individual and family welfare	5368	25.6
853B	Care of the elderly and disabled	10660	50.9
Total		20943	100.0

### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

### 3.21 Other community, social and personal services activities, NACE O, SNI 90-93

**Table 62 Process table of output, intermediate consumption and gross value added, 2005, mSEK**

	Basis for NA Figures		PRODUCTION APPROACH							
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models					Other	Total
				Benchmark Extrapolatio and models	CFM and ratios	CFC(PIM) & Imputed dw ellings	Other E&M	Total Extrap +Models		
Output	35664	385	97561			975	28542	29517		163127
IC	16199	2178	59924				10238	10238		88539
GVA	19465	-1793	37637	0	0	975	18304	19279	0	74588
		Adjustments					Final			
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing	estimate			
Output	163127	93	670		9812		173702			
IC	88539	1059	-1936		-746	226	87142			
GVA	74588	-966	2606	0	10558	-226	86560			

Surveys and censuses refer to summary accounts of local government and survey of the church of Sweden

Administrative records refer to central government records

Combined data refer to SBS

Extrapolation and models refer to NPISH

Data validation refers to incorrect recording

Conceptual adjustments refer to benefits in kind, PC, software, financial leasing, insurance and FISIM

Exhaustivness refer to estimates for hidden activities

Balancing is the item used in the final consolidation process between production and expenditure sides.

Compilations of Non-market output are described in section 5.9.

#### *Market output*

In the Swedish national accounts the industry is divided into and is calculated in terms of four sub-industries: SNI 90, Waste disposal and sanitation; SNI 91, Activities of membership and religious organisations; SNI 92, Recreational, cultural and sporting activities; and SNI 93, Other service activities. The output value and intermediate consumption are obtained from the SBS. Value added is calculated as output value minus intermediate consumption. The various sub-industries are detailed below.

#### **3.21.1 SNI 90 Waste disposal and sanitation**

##### *Output*

According to the SNI, sewerage services should also be covered by this industry. But, because this activity is integrated with that of waterworks, sewerage is assigned to SNI 41, Waterworks. Part of waste disposal and sanitation activity is provided by agencies of government. The source for this part is the local authority finance statistics. The output value is allocated to the following product groups:



**Table 63 Data on the output value SNI 90**

Product group	Description	2005 SEK million	Percentage weighting
71100A	Car benefits	18	0.1
7220EG	Computer systems/software produced on own account	7	0.1
713	Hire of machinery and equipment	12	0.1
5A-C	Trade Margin etc.	15	0.1
7020A	Other real estate letting	25	0.2
40200	Manuf. gas and distribution of gaseous fuels through mains	41	0.3
3710000	Recycling of metal waste and scrap	77	0.6
40100A	Electricity and distribution of electricity	82	0.6
4030000	Steam and hot water supply, incl cold water/ice for cooling	812	5.9
90	Sewage and refuse disp.	12765	92.1
Total		13854	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

*Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

**3.21.2 SNI 91 Activities of membership and religious organisations***Output*

The activity of the membership and religious organisations industry consists of the representation of interests by trade associations, employers' organisations and professional bodies. Representation of interests in trade union organisations, religious societies, political organisations etc. is classified under non-profit institutions serving households (NPSIH) and is described in Chapter 5 in conjunction with household consumption expenditure. The output value of the industry is obtained from the business statistics and is allocated to the product groups in the table below.

**Table 64 Data on the output value SNI 91**

Product group	Description	2005 SEK million	Percentage weighting
7220EG	Computer systems/software produced on own account	6	0.1
713	Hire of machinery and equipment	5	0.1
741A	Licence, patent and royalty services	21	0.3
913A	Activities of political organizations and other organizations n.e.c.	39	0.6
71100A	Car benefits	46	0.7
5A-C	Trade Margin etc.	46	0.7
9131000	Activities of religious organizations	79	1.1
804	Adult and other education	122	1.8
748	Other business services	449	6.5
912	Activities of trade unions	1074	15.6
911	Business, employers' and professional org.	4987	72.5
Total		6874	100.0

*Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

*Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

**3.21.3 SNI 92 Recreational, cultural and sporting activities***Output*

The industry consists of a range of highly varied activities, such as gaming activity, film and video activity, artistic activity etc. A supplement is included for work in progress and a deduction is made for industrial activity units in service enterprises falling within this industry. The output value is broken allocated to the product groups below:

**Table 65 Data on the output value SNI 92**

Product group	Description	2005 SEK million	Percentage weighting
551	Hotel services	78	0.1
71100A	Car benefits	89	0.1
713	Hire of machinery and equipment	46	0.1
744	Advertising services	104	0.2
748	Other business services	102	0.2
5A-C	Trade Margin etc.	101	0.2
552	Camping and other accommodation services	176	0.3
55A	Restaurant and bar services	278	0.4
741A	Licence, patent and royalty services	238	0.4
7220EG	Computer systems/software produced on own account	373	0.6
7020A	Other real estate letting	520	0.8
7140	Hire household articles/goods for personal use	795	1.2
925	Library, archive and museum activities	921	1.4
924	News agency activities	1566	2.4
92B	Originals	2193	3.4
9272	Other recreational activities	2692	4.1
741	Legal and business consultancy	2701	4.2
923A	Theatre, entertain.	3122	4.8
9231	Artistic and literary creation and interpretation	5470	8.4
921	Motion picture and video activities	6139	9.4
926	Sporting activities	7786	12.0
9271	Gambling and betting activities	8353	12.9
922	Radio and television activities	21157	32.5
Total		65000	100.0

The output value of the industry is obtained from the business statistics and is allocated to the product groups in the table below. The output value for gambling activity is calculated by deducting winnings paid out and product taxes from turnover. A supplement is also included for informal gambling output.

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

### **3.21.4 SNI 93 Other service activities**

#### *Output*

This industry also comprises a variety of activities, for example laundry activities, hair grooming and funeral services. A deduction from the output value of the industry is made for manufacturing activity units of service enterprises in this industry. A supplement is included for informal output in laundry services, hair grooming, beauty care, personal

grooming and other services. The output value is allocated to the following product groups:

**Table 66 Data on the output value SNI 93**

Product group	Description	2005 SEK million	Percentage weighting
2670	Stone goods	8	0.0
7220EG	Computer systems/software produced on own account	25	0.1
741A	Licence, patent and royalty services	24	0.1
713	Hire of machinery and equipment	13	0.1
71100A	Car benefits	30	0.2
20510	Other wood products	63	0.3
7020A	Other real estate letting	94	0.5
5A-C	Trade Margin etc.	159	0.8
741	Legal and business consultancy	178	0.9
9305	Other service activities	772	3.9
9303	Funeral and related activities	1639	8.3
9301	Laundering and dry-cleaning activities	3143	16.0
9304	Physical well-being activities	4228	21.5
9302	Hairdressing and other beauty treatment	9319	47.3
Total		19695	100.0

#### *Intermediate consumption*

Intermediate consumption is obtained from the business statistics. Balancing and plausibility assessment are performed in the supply and use tables.

#### *Value added*

Value added is obtained as the difference between output value and intermediate consumption value.

### **3.22 Private households with employed persons, NACE P, SNI 95**

The output value of the industry 'Private households with employed persons', SNI 95, consists of remuneration paid by private households to persons in the form of wages or benefits. An addition is also made for unrecorded activities. There is no intermediate consumption in the industry, so that output value here is also equal to value added.

The industry is defined in such a way that only persons who are in an employment relationship with the household are included. Occasional payments by the household to cleaners, window-cleaners etc. are not recorded under this heading but constitute purchases of services from traders falling within other industries.

The services produced in the industry consist mainly of assistance to disabled persons. The forms of assistance are laid down in special legislation, the Act concerning Support and Service for Persons with Certain Functional Impairments (LASS). Disabled persons qualify for assistance provided in various ways, either through local authority services or from non-profit organisations or the disabled person himself or herself may employ a person. It is this latter form of employment, which constitutes the output value of the

industry Households with persons employed. The disabled person may then receive compensation in the form of a transfer in order to finance the employment.

### **3.23 Extra-territorial organisations and bodies, NACE Q, SNI 99**

No activity is recorded under this heading. These entities are included in the authorities of Central Government. For example an embassy or consulate is included in the figures from the Government office of Sweden, in this case the Ministry of Foreign Affairs. Central Government entities abroad but within the Swedish economic territory are regularly included in the dataset delivered from The Swedish National Financial Management Authority (ESV) to the national accounts. It can be, for example, embassies and military activities.

### **3.24 Taxes on products, excluding VAT**

Taxes on products are taxes, which are payable on a good or service, which is produced or forms part of a transaction. The tax may be a specific amount per good or service or it can be calculated as a specific percentage of the price per unit or the value of the goods or services.

Taxes on products can be broken down into:

- a) value-added taxes, see section 3.25.
- b) taxes and duties on imports excluding VAT
- c) taxes on products excluding VAT and import duties

Taxes and duties on imports excluding VAT comprise compulsory payments, which are levied by general government or by institutions of the European Union on imported goods, excluding VAT, before they can be freely traded within the economic territory, and on services provided to resident units by non-resident units.

Taxes on products excluding VAT and import duties consist of taxes which are payable in conjunction with the production, export, sale, transfer, leasing or delivery of goods and services, or in conjunction with their use for own consumption or own fixed capital formation.

Taxes on products are recorded when the taxable activities, transactions or other events take place – when they become due. Only amounts that are supported by assessments, declarations or other instruments are recorded.

In calculations of GDP on the output side, output is valued at basic prices. This means that taxes and subsidies on products must be added or subtracted, respectively, in order to obtain GDP at market prices. Taxes and subsidies on products function here as a separately recorded component of the output of market products and must therefore also be calculated at constant prices.

The Swedish calculations for taxes on products are based mainly on the recording by the Financial Management Authority (ESV) of the income of central government departments and agencies under revenue headings, which are updated on a monthly basis. As regards taxes on products, as well as entries under revenue headings ESV also records income from a fund, which exists outside the budget – the Nuclear waste fund

(Kärnavfallsfonden). Since ESV records are cash-based and payments entered under the revenue headings are usually made in arrears, period reallocations must be undertaken in order to obtain the accrued value. In practice the income is shifted back in time, for example income for February to January. The most common time shift is of one month. The following revenue headings and fund income are classed as taxes on products (excl. VAT):

**Table 67 Revenue headings and fund income classed as taxes on products (excl. VAT)**

<b>Income title</b>	<b>Designation</b>	<b>SEK million 2005</b>
1144part	Lottery tax	1215
1341	Stamp duty	7828
1423	Sales tax on motor vehicles	2
1424	Tobacco duty	8208
1425	Duty on alcohol	10289
1428	Energy tax	63492
1436	Tax on waste	735
1452	Tax on advertising and publicity	826
1471	Customs duties	4307
1472	Other taxes etc. on imports	2
1473	Special agricultural duties and sugar levy	340
1481	Natural gravel tax and other taxes on goods and services	301
2153	Surplus surrendered by AB Svenska Spel	3747
1437	Env. levy on pesticides and commercial fertilisers	406
2543	Levies for the National Chemicals Inspectorate	66
	Nuclear waste fund	689
	Surplus surrendered by Systembolaget AB	330
	Fees for auto wreckage	271
	Fees to battery fund	93
	<b>Total taxes on products excl. VAT</b>	<b>103147</b>

The figures given above do not represent the values under the various revenue headings, but are the values entered in the national accounts output calculations.

#### ***1144 Lottery tax (part)***

The revenue heading consists of two parts, of which one is classed as a tax on products and one as current taxes on income. The part, lottery tax, which is classed as a tax on products consists of the tax payable by Swedish lotteries in which the prize consists of cash. Tax is levied at a certain percentage rate on the balance, which remains after total prizes have been deducted from total stakes. Payment and reporting to the Swedish Tax Agency take place in the month after the accounting period.

#### ***1341 Stamp duty***

Stamp duty comprises tax payable on the inheritance of real estate and site leasehold rights and on the granting of mortgages. In the case of an inheritance, the tax rate is a certain percentage of the value of the property. In the case of a mortgage, the tax rate is a

certain percentage of the mortgage amount for real estate, leasehold rights, aircraft, businesses or ships.

#### ***1423 Sales tax on motor vehicles***

Motor vehicle sales tax was levied up until the year of 2000. The tax is levied when a vehicle is first registered or, if the vehicle is taken off the road immediately on sale, at the time the immobilisation ceases. In the end of 2000 the tax ceased to be enforced but within this heading, amounts can be recorded because late payments can be referred to a period before 2001. The tax is charged as a specified amount per kilogram of service weight and for different environmental classes. The tax is payable at the latest within one month following the close of the month in which the tax liability arises.

#### ***1424 Tobacco duty***

Tobacco duty is collected on cigarettes, cigars, cigarillos, pipe tobacco, chewing tobacco and snuff. The duty is levied at a specified amount per item or per kilo. For cigarettes, the duty also comprises a specified percentage of the retail price. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

#### ***1425 Duty on alcohol***

The duty on alcohol consists of three parts; duty on spirits, duty on wine and duty on beer. The duty on ethyl alcohol (spirits) is charged at a specified amount per litre. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

The duty on wine and other fermented beverages is charged at a specified amount per litre, depending on percentage of alcohol by volume. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

The duty on beer is charged at a specified amount per litre, depending on percentage of alcohol by volume. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

#### ***1428 Energy tax***

The revenue heading consists of three parts: energy tax, carbon dioxide tax and sulphur tax.

Energy tax is payable on certain fuels, such as coal products, petroleum coke, petrol, paraffin, diesel oil, heating oil, natural gas, methane and LPG, and electric power. The tax on petrol and unmarked oils is differentiated with respect to their environmental properties. The energy tax is levied at specified amounts per litre, tonne, cubic metre or kilowatt-hour. Carbon dioxide tax is levied on petrol, coal products, petroleum coke, paraffin, diesel oil, heating oils, natural gas, methane and LPG. The tax is charged at specified amounts per litre, tonne or cubic metre. Sulphur tax is payable on the sulphur content of coal products, peat fuel, petroleum coke, diesel oil and heating oil. For solid fuels, the tax is collected at a certain amount per kilogram of sulphur in the fuel. For oils, the tax is levied at a certain amount per cubic metre of oil for every 10th of one per cent of sulphur. For all three taxes, payment and reporting to the Swedish Tax Agency take place as a rule in the month after the accounting period.

#### ***1436 Tax on waste***

Taxes on waste are paid for waste (specified amount per tonne) , which is brought to a waste disposal installation, where a waste to a quantity of more than 50 tons is deposited, or kept for more than three years. Taxes on waste are also paid for waste, which arises from activity mainly consisting of other than waste disposal if a quantity of more than 50 tons is deposited, or kept there for more than three years.

#### ***1437 Environmental levy on pesticides and commercial fertilisers***

The fertiliser levy is collected in two parts. The levy on nitrogen is charged at a specified amount for each whole kilogram of nitrogen in the fertiliser or if the proportion of nitrogen in the fertiliser is at least two per cent. The levy on cadmium is charged at a specified amount for every whole gram of cadmium in the fertiliser for the portion in respect of which the cadmium content exceeds five grams per tonne of phosphorus. The levy on pesticides is a specified amount for every whole kilogram of active ingredient in the pesticide. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

#### ***1452 Tax on advertising and publicity***

The tax is levied on advertisements intended for publication within the country and on publicity intended to be disseminated within the country in a form other than advertisements. The tax is charged at a percentage of the taxable value. A certain portion of the tax paid by periodicals is repaid. Payment must be recorded in the month after the close of the accounting period. Repayment to periodicals takes place twice a year.

#### ***1471 Customs duties***

For goods imported from third countries, duties are levied in accordance with the customs tariff. Importers that not have credit granted at Swedish Customs the duties are charges directly.

The source for the final calculations is Statistics Sweden's international trade statistics. Duties are shown broken down by type of goods. The total varies slightly from that presented by the Financial Management Authority. The data in the international trade statistics on the collection of customs duties is balanced at intervals with the import statistics.

#### ***1472 Other taxes etc. on imports***

Duty is payable on private imports of alcoholic beverages and tobacco goods.

#### ***1473 Agricultural duties and sugar levies***

Agricultural duties apply to agricultural products imported from third countries.

#### ***1481 Other taxes on goods and services***

The revenue heading consists of two parts, one of which is classed as taxes on products and the other as miscellaneous taxes on output. The tax on natural gravel is payable for broken natural gravel if extraction is carried out for any purpose other than the landowner's housing needs. The tax is levied at a specified amount per tonne.



### ***2153 Surplus surrendered by AB Svenska Spel***

Receipts from State sponsored pools. The income comprises surpluses arising in the operation of different kind of pools schemes. The amount payable consists of what remains of the State company's annual profit after consolidation, appropriation to adjustment funds, distribution to shareholders and any advanced payments made.

### ***2543 Levies for the National Chemicals Inspectorate***

The Chemicals Inspectorate levy is payable annually by any person who commercially manufactures or imports a total of more than one tonne of chemical products. The levy is in two parts, half based on number of products and half on quantities. Preliminary payment is due in one year and the final adjustment takes place in the following year.

### ***Nuclear waste fund***

Every reactor operator must pay a fee determined in relation to the energy supplied.

### ***Surrendered surplus of Systembolaget AB***

The income comprises the annual profit of the Swedish Alcohol Retailing Monopoly (Systembolaget AB) after depreciation, consolidation and distribution to shareholders. Payments are entered in the revenue heading in the year following the revenue year.

### ***Fees for auto wreckage***

A fee is taken out for cars, buses and trucks (maximum weight 3.5 ton) at the time of auto wreckage that are registered within the country. The amount depends on if the vehicle is imported or not. In this heading the revenues consists of fees due to the colander year.

### ***Fees to battery fund***

The fee is collected from those who produce or import batteries on a professional basis. The amount depends on type of battery and weight. For start batteries that include lead, the fee is based on a fixed amount per item. Payment and reporting to Swedish Environmental Protection Agency take place quarterly.

## **3.25 Value-Added Tax**

A value-added tax is a tax on goods and services, which is successively recovered by enterprises and is ultimately charged in full to the final purchaser. The producer is only required to pay the difference between the VAT on his sales and the VAT on purchases for his own intermediate consumption of goods and services or for gross capital formation.

VAT is recorded net in the sense that

- a) output of goods and services and imports are valued exclusive of VAT on outgoing invoices,
- b) purchases of goods and services are recorded inclusive of non-deductible VAT. VAT is recorded as a charge on the purchaser, not the vendor, and only on those purchasers who cannot deduct it. The bulk of VAT is thus recorded in the system as paid on final consumption, mainly on the consumption of households. Part of VAT, however, may be paid by enterprises, particularly those whose output is VAT-exempt.

In the economy as a whole, VAT is equal to the difference between all invoiced VAT and all deductible inward VAT.

The Swedish Financial Management Authority (ESV) records VAT under revenue heading 1411. Taxable persons whose assessment base exceeds a certain amount per fiscal year must, with some exceptions, report and remit the tax in the month after the close of the accounting period. Other taxable persons must record the tax in a special self-assessment declaration once a year. The payments are included in the preliminary income tax payable by these taxable persons. In order to obtain the accrued VAT, various period reallocations are undertaken depending on when the VAT is entered under the revenue heading.

In the output and use side calculations of GDP, theoretical VAT is used. This is calculated in the supply and use tables on approx. 400 product groups and per industry or purpose, respectively, for the different uses. Theoretical VAT is estimated as the actual VAT-rate for different products for the users that can not deduct the VAT according to Swedish VAT-legislation. An exception is that the VAT-calculation is reduced for the use if an evasion is an agreement between seller and buyer (with complicity). The difference between VAT receipts and the theoretical VAT ( 7727 million SEK year 2005) is an unallocated net operating surplus.

### **3.26 Subsidies on products**

Subsidies are current contributions from departments or agencies of general government or the European Union to producers. Subsidies on products are paid as a fixed or variable contribution per quantity or unit of value on the manufacture, sale or intermediate consumption of a certain product. Other subsidies are referred to as other subsidies on production.

In calculations of GDP from the output side, output is valued at basic prices. In other words taxes on products and subsidies must be added or subtracted, respectively, in order to obtain GDP at market prices. Taxes on products and subsidies function here as a separately recorded component of the output of market products and must therefore also be calculated at constant prices.

Product subsidies arise in the transport sector and cover mainly transport involving local bus services and railway transport. Sweden has also product subsidies from EU on agriculture products. The source for the calculation of product subsidies on transport is the Swedish National Financial Management Authority (ESV) and the source for the calculation of product subsidies on agriculture products is The Swedish Board of Agriculture. Subsidies are paid to the producers annually, which is in line with accrual recording.

**Table 68**

Product subsidies 2005	SEK million
Bus transport	10 580
Railway transport	385
Other transports	368
Agriculture	1 114
Total product subsidies	12 447

## **Chapter 4 The income approach**

### **4.1 Reference framework**

It is not currently possible to calculate GDP entirely with reference to the income side. The calculations, which are undertaken for the economy as a whole, are based on GDP at market prices determined in the production – expenditure calculations, and mixed income is obtained residually. In the industry-by-industry calculations for the economy as a whole, the sum of operating surplus and mixed income is obtained gross as a residual item.

### **4.2 Valuation**

The valuation and recording procedures which apply in the income approach for the economy as a whole can be summarised as follows:

- GDP at market prices measured from the expenditure and production side. See chapters 1, 3 and 5.
- Taxes on production. Regarding taxes on products, see sections 3.24 and 3.25; regarding other taxes on production, see section 4.8.
- Subsidies, see section 3.26 and 4.9.
- Wages and salaries. Covers cash payments of wages and salaries recorded in the year payment takes place, including benefits. A supplement is made for wage and salary payments not declared to the tax authorities.
- Social contributions. Compulsory social contributions are recorded on payment time-lagged by one month. Charges regulated by agreement follow the accounting principles of enterprises and insurance companies and recording procedures of government agencies and departments.
- Operating surplus net, non-financial corporations. Accounting data are adjusted to the NA concept, inter alia as regards valuation of inventories and costs of financial leasing. Accounting values for consumption of fixed capital are replaced by calculated values with valuation at replacement cost (current cost accounting). See section 4.10.
- Operating surplus net, financial corporations. Operating surplus calculated residually on the basis of value added at basic prices in accordance with the output calculations. See chapter 3.
- Operating surplus net, general government sector. In accordance with accounts of local authorities. See section 5. Calculated values for consumption of fixed assets. See section 4.12.
- Operating surplus net, owner-occupied dwellings. Value added in accordance with the output calculations. See section 3.17. Calculated values for consumption of fixed assets. See sections 4.10 and 4.11.
- Consumption of fixed assets. See sections 4.10 and 4.12.

### **4.3 Transition from private accounting concepts to ESA 95 national accounts concepts**

The procedure follows from section 4.2 above.

The calculations for the depreciation of fixed assets, which are available in the business accounting of departments and agencies of central government and non-profit institutions serving households (NPISH) follow different classification and valuation principles to those used for consumption of fixed assets in the national accounts system. It was therefore necessary to devise a distinct calculation system for consumption of fixed assets in the national accounts.

### **4.4 Roles of direct and indirect estimation methods**

In outline, the criteria for the income approach and the economy as a whole are as follows:

- The measurement methods for GDP are in the main direct.
- Taxes on production and subsidies are measured directly.
- Wages and salaries are measured directly with the aid of administrative sources. Supplements are calculated for undeclared wage and salary payments.
- Social contributions are measured directly.
- Net operating surplus for non-financial corporations is measured directly and is adjusted for certain conceptual differences. The adjustments involve indirect calculations to a certain extent. The operating surplus of financial corporations is measured directly as value added less net of other production taxes and subsidies. The operating surplus of general government is measured directly.
- The total of operating surplus and mixed income in the household sector is mainly measured indirectly as the outcome of the balancing of total operating surplus (GDP less net of production taxes and subsidies) and operating surplus of other sectors. Calculation of operating surplus in owner-occupied housing is made separately. As a general rule there is a limit of how large undeclared mixed income in the household sector is allowed to be.

### **4.5 Roles of benchmarks and extrapolation**

In the present calculations in accordance with ESA 95 the operating surpluses of non-financial corporations in 1996 have been extrapolated for earlier years on the basis of calculations in accordance with older systems.

### **4.6 Exhaustiveness**

The income approach in the present structure for the economy as a whole has the exhaustiveness, which is determined by GDP determined in the production – expenditure calculations. That part of incomes, which consists of wages and salaries as such, includes income in kind in accordance with the standards laid down by the tax authorities. In addition a supplement has been added to cover car benefits for the years 1997 onwards, where the utility value is deemed to exceed the standard laid down. See section 3.6. Gratuities are taxable income and must be declared as remuneration and recorded as the

actual amounts received. An adjustment for those cases in which such records are missing is included in a supplement for “black” or undeclared wages and mixed income.

## 4.7 Compensation of employees

Compensation of employees must include all compensation to employed labour for resident producers, including benefits in kind, employers’ contributions for the financing of pension, sickness, industrial injury, unemployment and wage guarantee insurance. Wages and salaries must also include payments in the form of commissions, fees and emoluments, gratuities and bonuses.

Costs to the employer which also represent a benefit to him or take the form of a collective amenity, for example arrangements for safety and comfort at the workplace, sport and recreation facilities etc., are not included in wages and salaries but are counted as intermediate consumption. Wages and salaries also do not include the costs of tools, special clothing etc. provided by the employer.

The above definition applies to the sum of wages and salaries and social contributions. The wages and salaries and social contributions portions are however each calculated and recorded separately.

**Table 69 Wages and salaries and social contributions**

	2005, SEK million
Wages and salaries	1 098 098
Social contributions	401 930
Compensation of employees	1 500 028

### 4.7.1 Wages and salaries

The total value of wages and salaries for the economy as a whole is based for the most part on Statistics Sweden’s statistical processing of the annual income statements (kontrolluppgifterna, KU) of employers to the tax authorities. Certain supplements and deductions are made to and from this administrative data source to take account of boundaries, reclassifications and under coverage. General government sources are also used for the public sector and comparisons are made with the SBS estimates. Income statements contain much more details however.

Income statements are the annual statements of gross wages and salaries in cash and other taxable forms of compensation, which resident employers render to the income recipients and tax authorities prior to assessment. Under Chapter 3 of the Tax Returns and Income Statements Act (1990:325), an income statement must be supplied to anyone who has received wages, salaries, fees, emoluments or other forms of compensation or benefits, which constitute taxable income for work performed. Even if there is no direct employer-employee relationship, an income statement must be supplied by a person who issues payment for work performed where there is a community of interest between the person issuing the payment and the employer. For example, a staff foundation which is linked to an enterprise and supplies some form of taxable benefit – e.g. free holiday accommodation – to the employees of the enterprise must issue an income statement.

An income statement must be supplied if the total value of remuneration and benefits to a person is SEK 100 or more for the whole year. If the remuneration/benefits were paid by a

natural person or the Swedish estate of a deceased person and are not charged to a business activity, an income statement need not be supplied where the total remuneration etc. has a value of less than SEK 1000 for the whole year. If tax has been deducted from the remuneration, an income statement must be supplied irrespective of the amount of the remuneration.

For wages and salaries or other forms of compensation (benefits) paid, a strict cash principle applies as wages and salaries are paid during the period in which the work is done. Sick-pay which is paid by the employer is counted as cash remuneration on the income statement and the classification of sick-pay is accepted in the national accounts.

The income statement is sent to the income recipient and to the Swedish Tax Agency for filing at the latest on 31 January of the year following the income year in question. Preliminary results without forward adjustment can be obtained from April onwards. Final results are normally available in October (see also discussion below).

Processing of income statements at Statistics Sweden covers both income statements from employers (kontrolluppgifter från arbetsgivare, KUA) and income statements relating to various types of social benefit (kontrolluppgifter som avser olika typer av sociala utbetalningar, KUS). The presentation, which follows only covers the income statements from employers.

Employers' income statements also contain a corporate identification number and an establishment number (applicable to enterprises with several establishments) which, when they are linked to the corresponding data in Statistics Sweden's business register(företagsdatabas, FDB), gives the institutional sector to which the employer belongs and the industries to which the enterprise and establishment belong. Final results relating to total wages and salaries, cross-classification of institutional sector and enterprise-based industry assignment are available in year t + ten months. KAU-based industry records relating to the non-financial corporations sector are available about six months later.

Apart from the income statements (KU), data from the Swedish Financial Management Authority (ESV) on military service pay, military catering and government wage guarantees are also used as source material in the wage calculations. Wage and salary data from SAS are used together with income statements in order to obtain a distribution of the company's payroll in line with its shared ownership, Sweden is holding a three-sevenths share. Tax assessment data compiled and processed by Statistics Sweden form the basis for the valuation of income in partnerships, which is treated as remuneration. A supplement is also added for "black" or informal wages and a deduction is made for wage guarantee compensation amounts, which are recorded instead as social benefits. The various means used to complement the income statements (KU) are discussed in detail below.

**Table 70 Means used to complement the income statements (KU)**

	2005, SEK million
KU	1048606
Supplement	50381
Deduction	889
Total volume of wages and salaries in Swedish output	1098098

#### **4.7.2 Social contributions**

The term social contributions is used in the Swedish national accounts to denote the greater part of pay-related compulsory social charges and employers' contributions regulated by agreement. The choice of the term social contributions, instead of employers' charges, is due to the fact that the latter also cover certain charges which are recorded in the national accounts as other taxes on production and to the fact that they also cover imputed contributions for the government sector. Charges for the financing of pension, sickness, industrial injury, unemployment and wage guarantee insurance are recorded as social contributions. The reason is that broadly speaking they finance corresponding benefits but they do not necessarily represent funded resources. Such aspects were first addressed when the institutionally delimited sector of social insurance was defined. Charges, which are not linked to any specific individual benefit, are recorded as other taxes on production. This type of charge varies considerably over time. In 2005 general employment tax, special employer's contribution and supplementary pension contribution were covered.

The social charges laid down by law are calculated with the aid of data from the National Social Insurance Board. Data on contractual charges of general government and enterprises are obtained from the ESV's records of total central government activity, Statistics Sweden's financial statistics for local authorities and county councils, the National Government Employee Pensions Board (SPV), the Financial Supervisory Authority, Statistics Sweden's financial statistics for enterprises and the Pensions Registration Institute (PRI).

#### ***Wages and salaries, components***

##### *Gross cash wages and salaries*

These include chiefly remuneration in respect of which the employer/payment issuer must pay the employer's charges. It may also be noted that certain taxable cash payments for which employers' charges are not paid are recorded as cash wages. This applies to gross cash remuneration, which during a year does not amount to more than SEK 1000 per recipient and remuneration to persons who at the start of the year have reached the age of 65. For those who have reached the age of 65, a special employer's contribution is paid. Compensation for single-day functions, i.e. business journeys not including overnight stays, per diem allowances, is regarded as wages. The same applies to allowances and compensation for journeys by persons using their own cars for business, which exceed standard tax-deductible amounts. Sick-pay which is paid through an employer is also recorded here. Compensation for journeys between home and place of work are normally treated as equivalent to cash wages. Severance allowances, which are paid by the employer on cessation of employment, are recorded here in the same way as disbursements from holiday funds. Benefits arising in the allotment of securities (company management options and staff options) linked to an employment relationship, which are taxed as income from employment, are counted as cash remuneration. The sum of the above components is shown in the income statement, and the value is included in its entirety in the total wages and salaries calculations.

### *Taxable benefits*

Here the combined value of taxable benefits other than cash wages and salaries is covered, for example the benefit of a free or partially free car, food, housing, holiday accommodation, telephone, free newspapers or interest concessions. The benefits are valued at the market rate with deductions for amounts the employee may have paid for the benefit out of his net pay. The taxable value of the benefit is included in its entirety in the wages and salaries calculation. As regards car benefits, the taxable value as laid down in the tax reform of 1991 corresponds to the utility value. Amended rules resulting from political decisions taken in year 1996 gave rise to a supplement to the taxable benefit value for 1997 and subsequent years. The 1997 supplement amounted to SEK 1227m and in 2005 it amounted to 1833 (car benefits are discussed in more detail in section 3.6).

### *Other taxable remuneration*

This includes remuneration, which does not form part of the basis for social charges or special employer's contributions. It covers, inter alia, annuities, dividends from profit-sharing schemes and in certain cases compensation to competitors in sporting events. The latter case applies to non-profit associations which are tax-exempt, whose main purpose is to promote sporting activity and in which compensation does not exceed half the basic amount per recipient per year. If the compensation is greater, it is recorded as cash remuneration and benefit. The wages and salaries calculations include that part of the category Other taxable compensation, which is paid to competitors in sports events. In 2005 this amounted to SEK 436m.

### *“Black” or undeclared wages*

The national accounts have to reflect all economic activity in the country, which means that incomes in the informal economy, or earned from “working black”, must also be included. In the calculations, information has been used from a study made by the National Swedish Tax Agency in 2006. We have also looked into the reconciliation possibilities inherent in the national accounts system. These are based on the common identity, which must exist between income and expenditure (see presentation in section 4.11). In order to assess the structure of labour in the informal economy with respect to industry etc, the above mentioned study has been used.

In this study a combination of methods have been used to shed light on labour in the black economy. For estimation, data from audits in respect of income tax have been used. The results of audits covering eight years from 1995 to 2003, is the basis for this process. The material was stratified into eight various types/sectors, 3 size groups and 25 activities. The material included 770 000 active companies including public sector and non-profit organisations with a total income of almost 1 000 billion SEK.

The results show that there was a strong concentration of underreported income from small companies. Self-employed and companies with total reported salaries of less than one million SEK represented 9 percent of reported income and as much as 85 percent of the calculated underreporting. Medium-sized limited companies defined as having salaries between one and five million SEK, represented ten percent of reported income from employment and eleven percent of the calculated underreporting. Limited companies with more than 5 million SEK in salaries and the other sectors stood for 81 percent of reported income and only four percent for the compiled underreporting.



As the relation between large and small companies varies among different activities the underreported amounts varies with the structure. Figures on the relative hidden income in relation to reported amounts were also compiled by activity. The results confirm to a large extent the general view of which lines of business are predominant in this respect. On the top were fishing, agriculture, forestry, restaurants, hairdressers, taxis, car services, construction, building maintenance and other personal services. Very small amounts were found in industrial manufacturing, mining, credit institutes waste management and electricity production.

Apart from the audit investigation other studies were also undertaken to verify the results. It was stated that established self-employed business owners compared with employees in the same sector had considerably lower declared incomes.

Other living standard indicators were checked. It included e.g. home size and car and boat ownerships. It came out that entrepreneurs had a standard of living that was commensurate with a higher income than officially declared. Food-stuff consumption was used as an estimate of true income for an entrepreneur household and a wage earner household respectively. It came out that there was an underdeclaration among business owners that supported the auditing method. Interview surveys have also been performed both to people buying black and to people selling black. The results of these however, only reveal a small part of black work. The individuals questioned may not always be aware of what is black or not.

From the number of people who admitted that they had worked black, an estimate has been made on how widespread this phenomenon is.

A comparison has also been made with a study from 1997 by the Swedish National Audit Office. From the results there seem to be a slight increase during the period. In the recent study an estimate of 13 percent is compiled. In the previous study this relation was calculated to 11 percent. The relation of black work varies a lot between different groups of population. It is much more common among students and trade workers and those on a low income. The purchasers are predominantly found among people with higher income and owners of owner-occupied dwellings.

The estimate based on the survey results is on the same level as the previous estimate in the national accounts, about 14 billion SEK. During the 2007 major revision a new estimate has been included in the NA. It is broken down by activity mainly in accordance with the results found in the audit study. Based mainly on these results a value of undeclared wages in 2005 amounting to SEK 35.4 billion, has been included as a supplement in the wages and salaries calculations.

#### *SAS adjustment*

The wages and salaries amounts recorded for SAS in the income statements do not necessarily correspond to the three sevenths, which should be recorded in the Swedish national accounts in accordance with the distribution of ownership and the agreement between the three countries affected, Sweden, Norway and Denmark. Discrepancies between the income statements and three sevenths of the company's total wages and salaries bill are entered as an adjustment item. The item may in principle be either positive or negative.

#### *Partnerships (handelsbolag, HB)*

In line with the SNA and ESA, institutional units, which keep a full set of accounts, enjoy independence in decision-making and are autonomous legal units and market producers should be assigned to the corporate sector. This applies to the Swedish partnerships and incorporated partnerships, which are classified in the business database as quasi-corporations in the non-financial corporations sector. In accordance with SNA 7.24 (c), the income from work of owners of quasi-corporations is recorded as wages and salaries. The same approach is reflected in the Swedish tax rules, according to which broadly speaking only the shares of part-owners in gains from real estate transactions or tenant-ownership rights are to be taxed under the property income heading. Other income is taxed as mixed income. The income of part-owners from partnerships is therefore classified in the national accounts in its entirety as wages and salaries. The value for 2005 amounted to SEK 6528m.

#### *Wages paid abroad and not shown in income statements*

The portion of the wages and salaries total of resident producers reverting to persons resident abroad is based in the national accounts on data from the Swedish Central Bank (see section 8.1). Part of it is contained in the income statement records and is declared by employers on special forms. The difference between the data of the Swedish Central Bank and those of the income statements give rise to a supplement in the calculations for total wages and salaries. The value for 2005 was SEK 1709m.

#### *Military service pay*

Persons performing their military service are treated in the national accounts as employees of the Armed Forces. Their compensation (pay) does not appear in the income statement data, however. Instead a supplement is included for military service pay based on central government records according to the Swedish Financial Management Authority (ESV). In 2005 the value amounted to SEK 823m.

#### *Military catering*

The value of military catering is treated, in line with military service pay, as a benefit in kind to military service personnel. The source is the ESV, and the value in 2005 was SEK 110m.

#### *Personal computers*

A scheme offering computers on leasing to employees, aimed at raising the general level of computer skills in society, was facilitated by legislation in 1997. The scheme gave rise to a supplement to the wages and salaries data from income statements with effect from 1998. The employees contribute to the financing of the loan by way of a deduction from their gross pay, the deduction being made prior to the calculation of employers' charges and tax. From a fiscal point of view it represents a reduction in wages after renegotiation. This justifies exemption from the rules on benefit taxation. In the national accounts, however, the hire of computer equipment by employees is treated as a transaction between the enterprises offering the equipment for hire and households. Financing takes place through an imputed wage benefit from the employer (See also section 5.7). The wages and salaries totals are recorded in the income statement data after the deductions from pay, which called for a supplement from 1998 onwards.

### *Wage guarantee*

Payments made under the government wage guarantee scheme in the event of company liquidation in accordance with the Wage Guarantee Act (1992:497) are included in the income statement data as wage and salary payments from departments and agencies of government. As the guarantee is financed by a social charge lay down by law, these payments are regarded in the national accounts as transfers to households in the form of social benefits. A deduction is therefore made from the wage and salary total shown in the income statement data. The value in 2005 was SEK 889m.

**Table 71**

Wages and salaries		2005, SEK million
KU	Gross cash pay	1 033 120
	Taxable benefits	16 883
	Other taxable compensations	436
	Undeclared wages	35 376
Supplements	Adjustment for airline	74
	Partnerships	6 528
	Wages paid abroad	1 709
	Military service pay	823
	Military catering	110
	Personal computers	3 928
Deduction	Wage guarantee	889
Total amount of wages and salaries in Swedish output		1 098 098

### *Social contributions, components*

Social contributions are either regulated by law or the results of agreements between employers and trade union organisations.

#### *Compulsory social contributions of employers*

These charges are legally binding. In 2005 the following contributions and percentage rates were applicable:

**Table 72 Compulsory social contributions of employers**

Retirement pension contribution	9.05
Surviving pension contribution	1.70
Health insurance contribution	10.15
Industrial injury contribution	0.68
Parental insurance contribution	2.20
Labour market contribution	4.45
Total	28.23
Seaman's pension contribution	0

A reduction in contributions applies in certain cases.

By the 10th of each month employers must pay preliminary income tax for their employees and employers' social contributions to the Swedish Tax Agency (SFS 1994:1978). The tax and contributions are based on wages/compensation paid in the preceding month. Entries in the national accounts are therefore made with a time-lag of one month.

The calculation of compulsory social contributions is based on data from the National Social Insurance Board. The value of employers' compulsory social contributions amounted to SEK 268 108m in 2005.

### *Social contributions of employers regulated by agreement*

Social contributions regulated by agreement comprise security benefits of the same type as those provided under the Social Insurance system. The benefits are financed by contributions to insurance companies and pension funds or by transfers to accounts within enterprises. The latter form applies to pensions.

The most common form is insurance. A transfer to an account has the advantage that the pension funds can constitute working capital in the enterprise. Such a liability may be entered in the company balance sheet under "Provisions for pensions". Formal pension funds also have credit-related advantages. It may be more flexible to borrow from a pension fund than from an insurance company. All pension commitments made by way of transfers to reserves in the balance sheet are administered by the Pensions Registration Institute (PRI). PRI calculates the pension liability and pays out the pensions. The pension liability must first be insured with the Pension Guarantee Mutual Insurance Company (FPG). If the employer chooses the insurance route, the Complementary Pension Plan for Salaried Employees in Industry (ITP plan), managed by the SPP (Svenska Personal-Pensionskassan/Swedish Staff Pension Fund) Insurance Company, is applicable. A similar scheme for privately employed persons is the Special Supplementary Pension (STP) plan, managed by Labour Market Insurance Policies – Pensions (AMF-P). For the person insured, it makes no difference whether the pension is managed by SPP or AMF-P or through the PRI/FPG system.

Data on the contributions paid to insurance companies and pension funds are obtained from the Financial Supervisory Authority. The combined value in 2005 was SEK 105215m. The amount of contributions, which remains in the enterprises, is calculated with the aid of data in Statistics Sweden's business statistics and from PRI. The value in 2005 was SEK 9720m.

### *Imputed social contributions regulated by agreement*

The vast majority of Private employers have to set aside money for pensions according to the law of 1967 for securing of pension promises (Lag 1967:531) om trygghande av pensionsutfästelse m.m.). Public sector employers are not subject to this law and therefore imputed pension contributions are calculated for departments and agencies of central and local government and for State corporations and public service activities. The value of these contributions is obtained as the difference between contributions actually paid and calculated total contributions. The National Government Employee Pensions Board (SPV) uses actuarial methods (ESA § 4.98) to calculate the imputed social contributions for the occupational pension schemes of central government employees. For local government, the total of social contributions is compared with the sum of the compulsory contributions, benefits and the adjustment for the change in the net equity of households in pension fund reserves. The latter exceeds the former and the difference is imputed social contributions.

**Table 73 The value of imputed social contributions in 2005 was SEK 18887m**

Social contributions		2005, SEK million
Actual		383 043
	Compulsory by law	268 108
	Regulated by agreement	114 935
Imputed		18 887
	Central government	6 224
	Local government	12 663
Total social contributions		401 930

## 4.8 Other taxes on production

Other taxes on production consist of all taxes for which the enterprise is liable as a consequence of its production activities, irrespective of the quantity or value of the goods and services produced or sold. They may be paid on land, fixed assets or labour in the production process or on certain activities or transactions. The time at which other taxes on production are to be recorded is when the taxable activities, transactions or other events occur – when their values have accrued or fallen due.

The Swedish calculations for other taxes on production are based for the most part on the records kept by the Financial Management Authority (ESV) of the income of departments and agencies of central government by revenue headings, which are entered each month. As regards other taxes on production, in addition to revenue headings, ESV also records income items from a fund outside the budget – the Deposit Guarantee Scheme. Since the ESV's records are cash-based and inward payments to the revenue headings usually take place in arrears, period readjustments are made by ESV in order to obtain the accrued value. In practice the incomes are shifted back in time, for example income items for February-January may instead be recorded as income for the calendar year.

The following revenue headings and fund income are classed as other taxes on production:

**Table 74 Revenue headings and fund income classed as other taxes on production**

Revenue heading	Designation	SEK million 2005
1123	Taxation of employee group life insurance	1 060
1251	Supplementary pension contribution, net	13 043
1281	General employment tax	33 105
1291	Special employment tax	29 275
1312	Real estate tax	25 108
1431	Special tax on electricity from nuclear power plants	1 794
1454part	Gambling tax on roulette games	29
1461part	Vehicle tax	2 908
1462	Road fees	722
2519	Concession fee for television area	331
2536	Lottery fees	30
2546	Local radio fees	123
2521	Fees for the Inspection committee	6
2554	Fee for Telecommunication	93
	Deposit Guarantee Scheme	541
	Nitrogen dioxide fee	588
Total other taxes on production		108 756

The above figures do not apply to the values in accordance with the various revenue headings but are the values entered in the national accounts calculations.

### *General remarks on contributions for employers and self-employed traders*

In revenue headings 1251, 1281 and 1291 the income consists of contributions laid down by law for employers and, usually also, for self-employed traders. The employers' contributions are recorded and paid, in most cases, in the month following the accounting period. Contributions for the self-employed are debited on the tax demand and are collected by the tax authorities. These amounts are determined in the year following the income year – the assessment year – and are usually transferred from the other revenue heading in the year after the assessment year. In order to obtain the accrued value, the incomes are reallocated to different periods depending on who made the contribution payment.

### ***1123 Taxation of employee group life insurance***

A special group life insurance premium tax is payable on premiums for group life insurance and on amounts disbursed representing compensation on the basis of such assurance. The tax amounts to specified percentages of the tax assessment base. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

### ***1251 Retirement pension contribution, net***

The income side of this revenue heading consists of employers' contributions and self-employed traders' charges (see General remarks on employment taxes above). The expenditure consists of transfers to the National Pension Fund, the Central government and the National Debt Office, which all manage parts of the Retirement Pension. The net residue remaining in the revenue heading will be the portion of the Supplementary Pension contribution covering income under the benefit heading. This income is not eligible for pension formation and remains in the State budget.

### ***1281 General employment tax***

The income under this revenue heading consists of employers' contributions and self-employed traders' contributions (see General remarks on employment taxes above). The tax was introduced on 1 January 1995 and is intended to contribute to the financing of EU membership.

### ***1291 Special employment tax***

The special employment tax is levied partly on earned income and partly on pension costs. The special employment tax on earned income is collected on earned income of which no part provides eligibility for social insurance benefits. The income consists of employers' contributions and self-employed traders' contributions (see General remarks on employment taxes above).

Any person taking out an employment pension must pay the special employment tax on the cost of the pension commitment. The tax is collected in conjunction with the collection of income tax from natural persons (self-employed traders) and legal persons.

### ***1312 Real estate tax***

Depending on the type of real estate, the tax is levied on a specified percentage of the tax base. The tax is collected in conjunction with the collection of income tax from natural persons and legal persons.

### ***1431 Special tax on electricity from nuclear power plants***

The tax is charged at a specified amount per kilowatt-hour for electricity produced in nuclear power plants.

### ***1454 Gambling tax on roulette games (cards and dices)***

The tax on roulette games is a fixed charge for each calendar month in which the tax liability arises. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

#### ***1461 Vehicle tax***

Vehicle tax is levied on motor cycles, passenger cars, goods vehicles, buses, tractors, heavy off-road vehicles, motor-driven appliances and trailers if they are, or should be, entered in the vehicle register and are not immobilised (taxable vehicle). The vehicle tax is calculated according to the vehicle's taxable weight and is payable in principle in advance for the fiscal year or fiscal period. Only the portion of vehicle tax, which is paid by legal persons, is included in other taxes on production, the remainder forms part of income taxes on households.

#### ***1462 Road fees***

Road fees are paid for motor vehicles with a total weight over 12 tons if the vehicle is used for only transportation on roads. Vehicles registered in Sweden pays for the right to use the Swedish roads. Foreign vehicles also pay to use the Swedish high-ways and some other roads. Vehicles used by the defence, police and civil-defence are not obligated to pay the fee.

#### ***2519 Concession fee for television area***

The concession fee is paid by programme companies holding a licence to broadcast TV programmes throughout the country, provided the company has the right to broadcast advertising and holds exclusive rights for this purpose in the country. The fee consists of a fixed and a variable part. The fixed part of the fee is payable in respect of each month in which broadcasting operations are conducted. The preceding year's advertising revenue forms the basis for the variable part.

#### ***2521 Fees for the Swedish Broadcasting Commission***

The fee is accounted by the Swedish Broadcasting Commission for radio and TV.

#### ***2536 Lottery fees***

The revenue heading records fees for applications, inter alias, to operate lotteries, bingo, casino games and various gaming machines and for type approval or approval under the Lotteries Act. The amount of the fees is scaled according to fee classes. The revenue heading also records levies for the inspection and supervision of gambling and lottery schemes in Sweden. The fees and levies are collected monthly or quarterly.

#### ***2546 Local radio fees***

Any person acquiring a licence to broadcast local radio must pay an annual fee. If there are several applicants for a licence, the amount of the fee is determined by an auction procedure. The fees are payable in equal parts four times per year.

#### ***2554 Fee for Telecommunication***

Any person who own public communication nets of public importance, is in action according to the Law of Electronic Communication and has a year turnover over a certain amount must pay a fee for financing strains and maintenance for the electronic communication.

#### ***Deposit Guarantee Scheme***

This guarantees deposits with banks and certain mutual funds. Every institution covered by the guarantee must pay an annual contribution. The contribution for one year is based

on the deposits of the institution at the close of the preceding year to the extent that the deposits are covered by the guarantee scheme.

### *Nitrogen dioxide fee*

Since 1992 a fee is collected for discharging and emissions of nitrogen dioxide (Knox) from larger facilities in Sweden.

## **4.9 Other subsidies on production**

Other subsidies on production consist of subsidies, apart from subsidies on products (see section 3.26), which resident producer units may receive as a consequence of involvement in production. For other non-market output, other non-market producers may receive other subsidies on production only in those cases in which such payments from general government are justified by general provisions applicable to both market and non-market producers.

Subsidies are recorded when the transaction or event giving rise to the subsidy takes place.

The Swedish calculations for other subsidies on production are based on ESV records of the transfer expenditure of departments and agencies of government. The transfers are recorded according to recipient sector. As it is the expenditure, which is recorded and no specific information is available on the period to which the expenditure belongs, no time-reallocation of the subsidies is undertaken in the national accounts.

The following expenditure is classed as other subsidies on production:

**Table 75 Expenditure classed as other subsidies on production**

<b>Subsidy</b>	<b>SEK million 2005</b>
Total	42 184
From central government	28 432
To central government corporations	5 843
To central government public service undertakings	397
To private corporations and private economic associations	15 259
To municipal corporations	651
Other subsidies from central government	6 282
From municipalities	2 384
From the EU	11 368

Approximately 21 per cent of central government contributions to private corporations consist of miscellaneous contributions to job creation schemes and 20 per cent to agriculture.

The contributions to municipal corporations consist mostly of miscellaneous contributions to public transport.

Contributions from municipalities consist mostly of grants for construction activity.



Contributions from the EU consist of payments from the various funds. A large proportion of these go to agriculture.

## **4.10 Gross operating surplus**

### *Operating surplus, net in non-financial corporations*

The operating surplus of non-financial corporations is calculated for the sector as a whole. The starting point is the enterprise-based business accountings for the sector, which is available from the business statistics. Since this data is not fully adapted to the national accounts definitions, adjustments are made together with calculations to compensate for the under coverage of tenant-owners' associations. Additions are also made for inclusion of unrecorded activities.

The definitional adjustments comprise adjustments for costs such as: inventory price changes, insurance costs and settlements, costs for financial leasing, capital formation in short-term inventories and computers as well as computer software. In addition the consumption of fixed assets calculated by enterprises is replaced by the national accounts calculation. For 2000 the net amount of the adjustments, excluding consumption of fixed assets, was +13 044m and consumption of fixed assets, which is higher in the national accounts, -13 324m. The adjustment of the operating surplus for these items was therefore +280m. To this is added a separate calculation of operating surplus for tenant-owners' associations of 9 676m, which results in a total operating surplus adjustment of 9 956m.

The adjustments for inventory price changes can be both positive and negative, depending on price trends for inventory goods. These so-called holding gains must not affect the operating surplus but are entered instead in the account for other changes in assets. The statistics on inventory changes do not currently give full coverage. The adjustment covers mining and manufacturing (SNI 10-37) along with wholesale and retail trade (SNI 50-52).

The cost of financial leasing is deducted from intermediate consumption in its entirety. The leasing charge consists of two parts: interest and amortisation. The interest is treated as a capital cost and is entered in the income redistribution account, while amortisation is the redemption of a debt and is entered in the Financial Account. In the statistics, leasing is partially deducted from intermediate consumption. For the remainder the leasing costs are estimated on the basis of total revenue to financial corporations and the already deducted amount. It is not currently possible to single out the household sector, which means that the deduction is overestimated.

For insurance premiums, the amount entered in intermediate consumption is replaced by the value calculated in the national accounts for insurance services to enterprises, including unincorporated enterprises. The entire amount of insurance settlements is deducted from receipts. Since the insurance costs of unincorporated enterprises are included in final consumption, the operating surplus is somewhat underestimated.

For short term inventories, computers and software, the investment concepts of the national accounts differ from the procedure in company accounting. Generally speaking, the accounting data underestimate true investment according to the national accounts definitions. The definitional difference has been estimated and deducted from

intermediate consumption. This is also a reason why consumption of fixed assets according to the national accounts is higher and the corresponding adjustment partially offsets the previous adjustment.

#### *Operating surpluses of tenant-owners' associations*

In the business statistics no data are collected for tenant-owner s' associations. It is therefore necessary to undertake a special estimate of the corresponding operating surplus, so that operating surpluses of non-financial corporations are not underestimated. Data on costs and income per square metre are obtained from the Income and costs inquiry for multi-dwelling houses (Intäkts- och kostnadsundersökningen for flerbostadshus, IKU). For tenant-owners' associations, the IKU is a sample survey based on tax assessment units with an area of over 500 square metres. In order to obtain an estimate for total operating surplus, the total area estimated for the whole population in the IKU is used.

#### *Operating surplus, net in financial corporations*

The institutional sector has a boundary, which coincides with the functional industries SNI 65-67. Other taxes on production, net, wages and salaries and social contributions as well as consumption of fixed assets have been deducted from value added at basic prices in these industries.

#### *Operating surplus, net, in local government*

The operating surplus is generated in municipal public service undertakings. The calculation is based on sales and deducts wages and salaries, social contributions, other taxes on production and consumption of fixed assets. These components are calculated in the same way as for the non-market producers of the local government sector. These calculations are described in more detail in section 5.9.

#### *Operating surplus, net, in social security funds*

The value is obtained from the real estate management of the National Pension Fund. The figure for this activity is contained in the Fund's annual accounts.

#### *Operating surplus, net, in owner-occupied dwellings*

This item covers privately owned dwellings and holiday cottages. The calculation of value added is described in section 3.17. Real estate tax, which is accounted as other production taxes, is deducted from value added and the value of other production subsidies according to data from the Swedish Financial Management Authority is added. Consumption of fixed assets is calculated in a model based on data from real estate tax assessment and real estate price statistics. A geometric rate of capital consumption is applied in the model with a rate of 1.21 percent for owner occupied dwellings and 1.28 percent for holiday cottages. These rates correspond to average service lives of 75 and 70 years respectively. The proportion of owner-occupied dwellings among all individual houses and holiday homes has been set at 93 per cent. The proportion is based on data from real estate tax assessment where the average share over the period 1997-2005 is 93.15 percent.

#### *Consumption of fixed assets*

The calculation of consumption of fixed assets made for all sectors in the national accounts follows in principle the model outlined in section 4.12.

For all market producers the calculation is undertaken separately for all combinations of sectors and activities. This has the advantage that it is possible to aggregate over sectors to show the breakdown by activity or aggregate over activities to show the breakdown by sectors.

**Table 76 Economic service lives for assets owned by market producers in the national accounts**

Asset	Economic service life	Declining balance rate	Capital cons. rate
Buildings and structures:			
Housing, one and two family dwellings	75 years	0,9100	0,0121
Housing, multiple-occupancy buildings	65 years	0,9100	0,0140
Holiday/weekend homes	70 years	0,8990	0,0128
Industrial buildings	31 years	0,9747	0,0314
Other buildings	32 - 48 years (depending on activity)	0,8892 – 0,9480	0,0188 – 0,0281
Structures	12 - 38 years (depending on activity)	0,9008 – 0,9100	0,0239 – 0,0751
Transport equipment:			
Cars, trucks and buses	13 years	1,7252	0,1327
Fishing boats	35 years	1,6500	0,0471
Ships	27 years	1,6500	0,0611
Aircraft	20 years	1,6500	0,0825
Machinery and equipment (capital consumption rates weighted together according to the composition of products in capital formation)			
			0,1022 – 0,4366
Computer software, purchased	5 years	2,0	0,4000
Computer software, produced on own account	10 years	2,0	0,2000

Source: US Bureau of Economic Analysis (BEA) except cars, trucks and buses (different service life), fishing boats (different service life) and computer software (different service life and declining balance rate).

## 4.11 Mixed income

Mixed income is the term used to denote the income of households from business activity and can be said to represent combined compensation for the personal capital invested in an unincorporated enterprise and compensation for the proprietor's own labour in the business.

Mixed income is obtained in the main calculations of the national accounts as a residual item based on GDP measured from the expenditure side reduced by known values for the other income components.

**Table 77 The calculation of mixed income**

		2005, SEK m
GDP at market prices		2 735 218
Consumption of fixed assets		336 152
Wages and salaries		1 098 098
	Declared	1 062 722
	Withheld (black)	35 376
Social contributions		401 930
Taxes on production		463 212
Subsidies		54 631
Operating surplus, net	Total (residual)	490 457
	Non-financial corporations	237 880
	Financial corporations	41 684
	Central government	0
	Local government	-2 750
	Social security	0
	Households (residual)	213 643
	Owner-occupied dwellings	56 376
Mixed income (residual)		157 267

*GDP at market prices*

The value is based on the calculations described in more detail in chapters 1 and 5.

*Consumption of fixed assets*

This refers to the total value of consumption of fixed assets in the economy. Details of the calculation are given in sections 4.10 and 4.12.

*Taxes on production and subsidies*

The calculation of the value of taxes on products and subsidies on products is described in sections 3.24-25 and 3.26, respectively, and of other taxes on production and other subsidies in sections 4.8 and 4.9, respectively.

*Actual wages and salaries and social contributions*

The calculations are described in section 4.7.

*Operating surplus, net*

The calculations for operating surplus net in non-financial corporations, financial corporations, local government, social security funds and owner-occupied dwellings are covered in section 4.10.

The value obtained residually for mixed income can be compared with the income tax assessment data on incomes from business activity in private unincorporated firms. However, this income is recorded after deduction of self-employed traders' own contributions to social insurance and interest charges in the own business. Data on these

are obtained from the National Social Insurance Board and Statistics Sweden's credit market statistics. The difference between mixed income calculated residually and the corresponding figure based on tax assessment statistics with adjustments is appreciable. The latter amounts to just above one fourth of the calculated figure. The proportion was between 25 and 30 per cent in the period 1993-2005. The difference between assessed and calculated income is due to additions of values for non-observed economy.

**Table 78 Comparison of mixed income calculated residually in the National Accounts and assessed by the Swedish Tax Agency**

	2005, SEK million	Per cent
Mixed income calculated residually	157 267	100
Income from business activity assessed for tax	32 054	
Deduction of interest charges (excluding housing)	3 767	
Traders' own contributions	7 366	
Total assessed income adjusted for deduction of interest charges and own contributions	42 752	27
Difference between calculated and assessed mixed income	114 515	73

## 4.12 Consumption of fixed assets (for non-market output)

### 4.12.1 Introduction

In the calculation of GDP gross value added in general government and non-profit institutions serving households (NPISH) is calculated as the sum of costs where consumption of fixed assets forms one part. The main purpose with the calculation is to distribute the value of capital formation in produced fixed assets to the period where it is used up in production.

In the national accounts, consumption of fixed assets is valued at actual replacement cost (current cost accounting) and in the average prices of the base year. The latter is needed to make comparisons between consecutive years and to construct chain volume indices. This means that fixed assets remaining in the stock but acquired in an earlier period has to be re-valued in the current prices of the actual period.

### 4.12.2 Sources

Consumption of fixed assets is calculated on the basis of the information available on gross fixed capital formation. This means that the same classifications as is used in the compilations of gross fixed capital formation provide the benchmark for the calculations of consumption of fixed assets. Information on price changes is also obtained from the investment calculations.

Apart from gross fixed capital formation at current and constant prices, information is also needed on the rate of capital consumption (or average economic service life in combination with the declining balance rate) and other changes in the volume of assets. In the latter case it is mainly a question of reclassification effects when all or part of an activity changes function/industry or institutional sector belonging.

For further information on gross fixed capital formation, see sections 5.10 and 5.11.

Information on depreciation rates have been taken from US Bureau of Economic Analysis (BEA). In some cases, notably automobiles, roads and dwellings, modifications of the service life have been made. In cases where no information has been available, e.g. computer software, the double declining balance rate in combination with rough estimates of economic service life has been used.

#### 4.12.3 Calculation method

The calculation of consumption of fixed assets at Statistics Sweden is made by use of a Perpetual Inventory Method (PIM) with geometric depreciation rates. The method is used for data back to 1993.

Gross stocks are not calculated with the present method. The net stock at the beginning of year 1993 has been estimated with the long times series of data on gross fixed capital formation compiled according to the former activity classification (SNI69). Thereafter a reclassification was made of the calculated stock value to SNI1992/NACE rev. 1 for each asset group in the stock of fixed assets. The reclassification is based on the relation of gross fixed capital formation data regarding 1993 between the former and the actual activity classification.

For the succeeding years the net stock at the beginning of the year (opening balance),  $N_t$ , valued at the average prices of the previous year, is simply taken from the calculation of previous year closing balance (end of the year). The stock is then recalculated to the price level of the actual year to form the starting point of the calculation of capital consumption. The recalculation is done by use of the implicit price deflator of the corresponding data on gross fixed capital formation. The same deflator is used to convert consumption of fixed assets in current price to constant prices.

The consumption of fixed assets,  $K1$  is calculated in current prices according to the following formula:

$$K1 = \delta_t \cdot N_t + (1 - \sqrt{1 - \delta_t}) \cdot GFCF_t$$

where  $\delta_t$  is the geometric rate of capital consumption. This rate is kept fixed over time if no specific information on changes in the rate is available.  $GFCF_t$  is the gross fixed capital formation during the year. The GFCF of the year is assumed to be in service half of the year on average.

The net stock at the end of the year (which is also equal to the net stock at the beginning of the next year in constant (the previous year) prices is calculated according to the following formula:

$$N_{t+1} = N_t + GFCF_t - K1 + K12$$

where  $K12$  is the sum of all changes in the stock level due to reclassifications.

#### 4.12.4 Economic life of units of capital

Capital consumption rates (service life assumptions) depend on the aggregated product groups into which stocks of fixed assets are subdivided. Machinery and equipment are broken down into transport equipment and other machinery and equipment.

Transport equipment consists mostly of passenger cars but, in cases where other transport equipment predominates, e.g. trucks and buses, the capital consumption rates are based on such information. Machinery and equipment also include computers and other office equipment. At present no separate calculation is made for these; they are included with other machinery and hence affect the capital consumption rate accordingly.

Buildings and structures are the other main category. Structures are calculated separately if they are of significant value, e.g. roads and streets. For buildings allowance is often made for ways in which the area of use affects their economic life. Thus a shorter life, higher rate of capital consumption, is assumed for public buildings, which are used by large numbers of people, e.g. schools and hospitals, than for purely administrative buildings used by courts and government departments.

The third main category is dominated by computer software. For software a distinction is made as regards its economic service life depending on whether it was purchased (standard software) or developed in house. The latter type is assumed to have a longer economic service life and thus a lower rate of capital consumption, because it is tailored to the needs of the business and ready-to-use alternatives are seldom available.

**Table 79 Depreciation rates for assets of general government and NPISH in the national accounts**

<u>Asset</u>	Economic service life	Declining balance rate	Capital consumption rate
Buildings and structures:			
Public buildings	40-50 years	0.91	1.82% - 2.28% (depending on use)
Roads and streets	40 years	1.5775	3.94%
Railways	50 years	0.9480	1.9%
Dwellings	65-75 years	0.91	1.21% - 1.4%
Transport equipment:			
Cars, trucks and buses	13 years	1.7252	13.27%
Machinery and equipment:			
Machinery in activities of general government and NPISH (capital consumption rates weighted together according to the composition of products in capital formation)			13.32% - 34.44% (depending on function/activity)
Other assets			
Computer software, purchased	5 years	2.0	40%
Computer software, produced on own account	10 years	2.0	20%

For roads SCB uses a 40 year lifetime combined with a declining balance rate of 1.5775 which gives a depreciation rate of 3,94%. This depreciation rate is within the interval of 3.3% to 4.0% suggested by the GNI Committee, although the committee proposes a lifetime in the interval 50 to 60 years combined with a declining balance rate of 2.0. Due to lack of data on investments and on lifetimes, SCB has not been able to make separate calculations for the different components of the roads (road base, surface layers etc.) In 2006, a study on the consumption of fixed capital on roads including investigation of lifetime assumptions was made at SCB. No changes in the estimation methods were made as a result of the study.



## Chapter 5 The expenditure approach

### 5.0 GDP according to the expenditure approach

The table below shows GDP according to the expenditure approach. Household final consumption expenditure accounts for almost 50 percent and government final consumption expenditure 26 percent of GDP. Sweden is a very open economy and exports are almost 50 percent of GDP.

**Table 80**

Expenditure approach, level and shares of gross domestic product 2005		
	Million SEK	percent
Household final consumption expenditure	1328	49
Government final consumption expenditure	723	26
Gross fixed capital formation	476	17
Inventories	-4	0
Exports	1333	49
Imports	-1121	-41
GDP	2735	

### 5.1 – 5.6

The points covered by sections 5.1 – 5.6 are discussed for the components in question under headings 5.7 – 5.18.

### 5.7 Household final consumption expenditure

#### 5.7.0 Summary and process table

**Table 81 Process table of household final consumption expenditure 2005, mSEK**

Level of Details	Basis for NA Figures									
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models					Other	Total
				Benchmark extrapolations	CFM and ratios	CFC(PIM) & Imputed Dw.	Other E&M	Total Extrapol+Models		
<b>HFCE</b>	<b>230 858</b>	<b>46 491</b>	<b>182 353</b>	<b>406 821</b>	<b>2 125</b>	<b>167 056</b>	<b>222 003</b>	<b>798 005</b>	<b>-1 763</b>	<b>1 255 944</b>
01 - Food and non-alcoholic beverages			151 033					0		151 033
02 - Alcoholic beverage	18 822	17 980	2 626					0		39 428
03 - Clothing and footwear				62 168				62 168		62 168
04 - Housing, water, electricity	68 648			5 385		167 056	106 821	279 262		347 910
05 - Furnishings, household equipment and recreation			1 651	58 878				58 878		60 529
06 - Health	14 963		14 085	5 284			4 045	9 329		38 377
07 - Transport	54 692			73 693			56 669	130 362		185 054
08 - Communication	39 666			3 776				3 776		43 442
09 - Recreation and culture	19 295	9 581	12 943	97 273			3 928	101 201		143 020
10 - Education	2 784			591				591		3 375
11 - Restaurants and hotels				60 556				60 556		60 556
12 - Miscellaneous goods	11 988	18 930	15	39 217	2 125		50 540	91 882		122 815
Transition to national concept								0	-1 763	-1 763

Level of Details	Adjustments					Final estimate
	Data validation	Conceptual	Cut-off	Exhaustive ness	Balancing	
<b>HFCE</b>	<b>-879</b>	<b>4 495</b>	<b>0</b>	<b>22 559</b>	<b>0</b>	<b>1 282 119</b>
01 - Food and non-alcoholic beverages				2 793		153 826
02 - Alcoholic beverages, tobacco and narcotics	-1 434	4 495		3 706		46 195
03 - Clothing and footwear	-42					62 126
04 - Housing, water, electricity, gas and other fuels	-69			673		348 514
05 - Furnishings, household equipment and routine	210			1 057		61 796
06 - Health				1 621		39 998
07 - Transport						185 054
08 - Communication				854		44 296
09 - Recreation and culture	179			953		144 152
10 - Education						3 375
11 - Restaurants and hotels				10 373		70 929
12 - Miscellaneous goods and services	277			529		123 621
Transition to national concept						-1 763

Surveys & Censuses refers to the Household Budget Survey, special information on tobacco, NA energy balances, tele communication services, surveys covering package tours, summary accounts of local government.

Administrative records refer to company annual report for liquor, TV licenses and estimates for personal assistant services.

Combined data refer to the SBS, Turnover statistics, VAT-material, the Food sales report.

Benchmark extrapolations refer to trend extrapolations by the help of SBS, Turnover statistics and VAT-material.

Models are used for dwellings, motor vehicles and bank and insurance estimates.

Data validation estimates arise in the supply and use reconciliation process

Conceptual adjustment refer to addition for VAT is the estimate is collected from book-keeping excluding VAT.

Exhaustiveness are all additions for not registered estimates.

## 5.7.1 Reference framework

### 5.7.1.1 Definitions, boundaries

Household consumption consists of all expenditure of the household sector on durable and non-durable goods and on services. On the other hand, those purchases that are made in connection with a business activity and are regarded as deductible operating costs are not included.

Used consumer goods which are sold within the household sector should only be included, in accordance with international recommendations (SNA), in respect of any increment which may have arisen on sale, i.e. in practice only if the sale occurred through a third party and a trade margin was created.

Consumption is recorded when ownership is transferred from the vendor to the purchaser, i.e. generally speaking at the time of purchase, in other words irrespective of the time of delivery. In the case of hire-purchase, it is recorded at the time the contract is signed.

Capital goods purchased by households are treated as consumption despite the fact that, from the household's point of view, they count as investment. The exception is the purchase of a private home or holiday/weekend home, which is treated as real capital investment.

Total private consumption of households, which is contained in the balance of resources, comprises the consumption of resident households. Resident households are considered to include persons who are permanently resident in Sweden, which means that they must have stayed in the country for at least one year. The consumption of resident households consists of consumption both in Sweden and abroad, hence tourist expenditure and expenditure of diplomats and military personnel abroad are included. In the case of business travel, the portion financed by travel allowances is included in the employers' intermediate consumption costs. The expenditure of non-resident tourists, diplomats etc. in Sweden are deducted in order to obtain the consumption of only resident households.

In practice the procedure is that, when the calculations are performed for the various goods and services items, what is consumed in Sweden is measured, regardless whether it is foreign tourists or Swedes who make the purchases. In order to calculate total household consumption, a supplement is added for the consumption of Swedes abroad and a deduction is made for the consumption of foreigners in Sweden. Neither supplement nor deduction can be allocated to the various purposes, which is why they are recorded as lump sums.

#### *5.7.1.2 Demarcations between household consumption, transfers and general government consumption*

Households make many types of payment to departments and agencies of government and to non-profit institutions, which makes it necessary to define which payments represent household consumption and which represent transfers to general government.

The main criteria for determining whether a transaction is to be classified as household consumption are that there must be a clear and unambiguous relationship between the payment and receipt of something in return and that the payment must be voluntary.

Moreover it is solely the household's expenditure in connection with the purchase, which is regarded as consumption. The expenditure is identical to the sale by the government body to the household. For example, when children are looked after at a crèche, it is only the charge paid by the household, which is regarded as household consumption.

Compulsory payments to departments and agencies of government for services whose main purpose is to function as an instrument of public administration are treated as taxes. This applies even where a certain element of voluntary action arises. Examples of such payments, which are thus not household consumption but are recorded instead as transfers, are licences for privately owned vehicles, boats or aircraft and licences to hunt, shoot or fish.

All payments whose main purpose from the point of view of general government is to provide a source of income and which cannot be identified in isolation with any consideration in return are regarded as transfers. The boundary between taxes and purchases of services from general government is determined by whether the licence is given automatically in return for payment of a specified amount. In that case, it is a tax. But, if general government makes use of licensing in order to exercise control in a

particular area (competence, qualifications), the payment for the licence is treated as the purchase of a service, unless the payment is manifestly disproportionate to the cost of providing the service. Examples of purchased services are driving licences, passports, flying certificates, TV and weapon licences and museum entrance fees.

The above principles for payments between households and general government also apply to payments between households and non-profit institutions, which means that fees for membership of such organisations are treated as transfers. Donations of households to welfare organisations are not included in consumption expenditure.

#### *5.7.1.3 Demarcation between household and general government consumption for health and medical care*

An area, which poses problems of demarcation between household and general government consumption, is that of consumption for health and medical care.

Government social security systems usually only require the individual household to pay a small portion of the actual health and medical care costs. The Swedish National Accounts only record that part which households pay directly as household consumption expenditure. The remainder of health and medical care costs is included in actual final consumption of households. These services are financed by general government or non-profit institutions and are provided to households in the form of social transfers in kind. The public portion is also recorded as final consumption expenditure of general government. The expenditure at current prices in household consumption thus gives an indication of how much money households have devoted to health and medical care, but says nothing on how much health or medical care they have received.

#### *5.7.1.4 Demarcation of consumption between private households and self-employed traders*

In those cases in which the household contains a person who also runs a private business, only the expenditure, which is not devoted to the business is recorded as household consumption. For that reason, for example, expenditure that is attributable to agricultural business operations is not included for farming households. But goods taken out of the business for use in the private household, for example food, are included and valued at the basic price of similar products sold on the market.

#### *5.7.1.5 Classification*

Household consumption is classified partly according to the intention or purpose of the expenditure and partly according to the degree of durability. In the national accounts calculation system there is a further subdivision. There is also a bridge table between product groups (goods and services) and purposes. This classification is used to carry out product-by-product reconciliations between supply and use in the NA system.

The classification by purpose is very detailed. There are twelve main groups, which in turn consist of a variable number of subgroups. For certain purposes, there are also up to four levels of detail. The twelve main groups are listed below, together with the non-allocated supplements, which are included in order to obtain total final consumption expenditure of resident households.

Food and non-alcoholic beverages (purpose 01)

Alcoholic beverages and tobacco (purpose 02)

Clothing and footwear (purpose 03)

Housing, fuels and electricity (purpose 04)  
 Furnishings, household equipment and services (purpose 05)  
 Health and medical care (purpose 06)  
 Transport (purpose 07)  
 Communication (purpose 08)  
 Recreation, entertainment and cultural services (purpose 09)  
 Education (purpose 10)  
 Restaurants and hotels (purpose 11)  
 Miscellaneous goods and services (purpose 12)  
 Swedish tourist expenditure abroad  
 Foreign tourist expenditure in Sweden (minus)  
 Consumption in non-profit institutions serving households  
 Total household consumption

The purposes are published quarterly in accordance with the above presentation. The annual calculations are published in a more detailed presentation.

The following durability grouping is used:

Durables  
     Vehicles  
     Other durables  
 Semi-durable goods  
 Non-durables  
     Foods  
     Other non-durables  
 Housing  
 Other services  
 Swedish tourist expenditure abroad etc.  
 Foreign tourist expenditure etc. in Sweden (minus)

The durability groups are simple summations of the various purposes. Tables with household consumption grouped according to durability are published every quarter.

### **5.7.2 Valuation**

Valuation is based on the purchaser's price, i.e. the price paid by the purchaser on purchase in accordance with ESA 3.06. Consumption of goods produced for own account is valued at basic prices. For used goods, which are sold in the household sector through a third party, only the margin realised on the sale is recorded.

In the case of hire purchase, in accordance with ESA 1.52, it is the purchase price including all supplements in the form of delivery and installation charges, which constitutes the value of the product in question. The interest element is not included in the value. Interest charges are not regarded as household consumption, but are treated as a transfer between borrower and lender.

### **5.7.3. Transition from private accounting concepts to ESA 95 national accounts concepts**

No comments

#### **5.7.4 Roles of direct and indirect estimation methods**

Direct measurement methods are used for most expenditure in household consumption. However, indirect measurement methods are used to calculate the utility value of all housing apart from rented apartments. In addition, indirect methods are used to record the utility value of car benefits under purpose 07425 and for the PC benefit under purpose 09413.

#### **5.7.5 Roles of benchmarks and extrapolation**

Benchmarks and extrapolation have been used in the calculations as listed below.

**Table 82 Benchmarks and extrapolation used in the calculations**

Household final consumption expenditure, SEK million							
COICOP	Designation	NA 2004	HBS 2004	RTS 2002	Ratio HBS/NA	Benchmark	Annual calculation
<b>01</b>	<b>Food and non-alcoholic beverages</b>	150 681	126 185	136 208	0.84	Annual	Survey
<b>02</b>	<b>Alcoholic beverages, tobacco, narcotics</b>	47 228	...	...			
<b>021-2</b>	<b>Alcoholic beverages, tobacco</b>	44 946	23 051	38 360	0.51	Annual	Census
<b>023</b>	<b>Narcotics</b>	2 282	...	...		2001	Various
<b>03</b>	<b>Clothing and footwear</b>	58 837	51 265	56 130	0.87	2002	Extrapolation
<b>04</b>	<b>Housing, electricity, gas and heating</b>	338 408	...	...			
041	Actual rentals	103 210	...	...		Annual	Adm. data
042	Individual houses and holiday homes	159 235	...	...		Annual	Adm. data
043	Maintenance and repair of the dwelling	4 750	...	...		1995	Extrapolation
045	Heating; electricity, gas, oil, etc.	71 213	...	...		Annual	Annual
<b>05</b>	<b>Furnishings, household equipment,</b>	57 416	63 200	54 908	not rel	2002	Extrapolation
051	Furniture, fittings, rugs and carpets	24 149	24 122	19 209	1.00	2002	Extrapolation
052	Household textiles	5 269	5 420	4 899	1.03	2002	Extrapolation
053	Household appliances	4 380	9 818	8 366	not rel	1995/2002	Extrapolation
054	Housewares incl. glass and china	7 004	7 165	7 259	1.02	2002	Extrapolation
055	Tools, batteries, lamps, etc.	5 820	9 318	5 495	1.60	2002	Extrapolation
056	Goods, services for routine maintenance	10 794	7 354	9 681	0.68	2004	Extrapolation
<b>06</b>	<b>Health and medical care</b>	37 686	25 535	37 683	0.68		
061	Medical and pharmaceutical products	17 187	12 528	37 683	0.73		
06111	Prescription medicines	12 349	8 173		0.66	Annual	Census
061rest	Other medical products	4 838	4 355	3 155	0.90	1995/2002	E95:27%,E02:63%
062	Out-patient medical care	18 748	12 894	...	0.69	2004/Annu	E75%, Ann25%
063	Hospital care	1 751	87	...	0.05	2004/Annu	E04:57%/Ann43%
<b>07</b>	<b>Transport</b>	172 192	142 267	...	0.83		
071	Vehicles	53 821	58 531	...	not rel	1995/Annu	E95:9%,Ann91%
072	Vehicle operating costs	94 462	68 933	...	0.73		
0721	Spare parts	6 833	6 537	...	0.96	2004	Extrapolation
0722	Petrol etc.	45 180	48 382	...	1.07	Annual	Annual
0723	Maintenance and repairs	24 195	9 746	...	0.40	1995	Extrapolation
07241-2	Driving lessons, tests and inspection	3 966	2 147	...	0.54	1995/Annu	E95:26%,Ann74%
07243	Toll facilities	408	...	...		2004	Extrapolation
07244	Parking	2 615	811	...	0.31	1995/Annu	Extrapolation
07245	Car benefit, car hire	11 265	917	...	not rel	1995/Annu	E95:8%,Ann92%
073	Transport services	23 909	15 196	...	0.64	1995/2004	Extrapolation
<b>08</b>	<b>Communication</b>	44 085	31 661	5 201	0.72		
0811	Postal services	2 659	948	...	0.36	2004	Extrapolation
0812	Telecommunications equipment	1 218	2 316	5 201	1.90	1995	Extrapolation
0813	Telecommunications services	40 208	28 398	...	0.71	2004	Extrapolation
<b>09</b>	<b>Recreation and culture</b>	141 125	137 680	64 247	0.98		
091	Radio, TV, photo, IT equip., CDs etc.	23 656	19 228	23 936	0.81	2002	Extrapolation
092	Other major durables for recreation	6 571	10 149	2 832	not rel	1995/2004	Extrapolation
09211	Caravans and trailers	2 153	2 453	...	not rel	1994	Extrapolation
09212	Boats	1 915	6 062	...	not rel	2004	Annual
09213-5	Other major durables for recreation	977	1 277	...	not rel	1995/2004	Extrapolation
093	Other recreational items and equipment	27 400	22 416	25 513	0.82	1995/2002	Extrapolation
094	Recreational and cultural services	52 717	33 086	1 453	0.63		
09411-3	Sport and recreation	15 878	10 048	...	0.63	2004	Extrapolation
09414	Municipal music school fees	219	...	...		Annual	Adm. data
09415	Course fees	1 438	658	...	not rel	1997	Extrapolation
09421	TV licences	6 248	6 543	...	1.05	Annual	Quantity-price
09422	Cable and satellite TV	6 362	3 485	...	0.55	Annual	Adm. data
09423	Photographic services	830	1 459	...	1.76	2004	Extrapolation
09424	Hire of equipment	1 380	1 656	...	1.20	2004	Extrapolation
09425	Cinema	1 340	1 165	...	0.87	Annual	Adm. data
09426-7	Cultural services	3 445	3 069	...	0.89	2004	Extrapolation
0943	Gaming	15 577	5 002	...	not rel	Annual	Adm. Data
095	Books, newspapers and stationery	16 655	15 028	10 514	0.90		

### 5.7.6 Exhaustiveness

#### *Household budget statistics (HBS)*

Data on household consumption in accordance with the national accounts definitions are not available in a single statistical survey. In the household budget surveys and surveys on household expenditure (HBS, HBU and HUT) carried out at intervals of a number of years, Statistics Sweden has attempted to measure household expenditure in terms of definitions which coincide as closely as possible with those of the national accounts.

HBS-statistics for the years 2003-2005 - estimating year 2004 – was intended to be used for benchmarking the household consumption of year 2004. The HBS-figures were grossed up for persons older than 79 years, but the estimates turned out to underestimate the household consumption to a great extent for some purposes when compared with other sources. The HBS-statistics could not be used directly and very extensively for the benchmarking this time. The main reason for the rejection was that these HBS-surveys had too small samples of households which made the interval of confidence too big. The HBS-statistics have, however, to a great extent been used to allocate the consumption under many of the purposes to different product groups by the use of shares.

#### *Retail trade sale 2002, SBS and VAT*

Statistics Sweden has conducted surveys of the sales of the different SNI-industries 50-99 per product of goods and services. In these surveys a question was also included on sales to others than households. By combining industry turnover figures with the goods and services sold by each industry, an industry/goods matrix is obtained. The matrix consists of 70 industries (including surveys also of service activities) whose turnover is distributed over 100 different goods and services. The matrix should be updated every 5 years according to EU regulations. However, now the SBS contains a survey for collection of annual information. As we could not use the HBS-statistics very extensively for benchmarking, the retail trade sale for 2002 has been used to a great extent instead for benchmarking goods included in the household consumption expenditures. Structural business statistics also includes a question on sales to different groups of buyers, e.g. households. This information has also been used for checking and consolidating some estimates included in the household consumption expenditures.

Monthly Turnover statistics and also estimates by industry based on VAT-reports are available for the quarterly NA. This information is used in the matrix for extrapolation of consumption expenditure by purpose. The trend figures for the different industries are distributed over the various goods and services and estimates for each item is calculated. In the quarterly calculations the turnover statistics account for around 30 percent of total household consumption allocated to purposes, while in the annual calculation they account for around 20 percent.

#### *Adjustments and reconciliations in the annual calculations*

The trend figures for the turnover statistics are also compared on an annual basis with the results obtained when the annual SBS and the final VAT records have been collected and processed. Comparisons are undertaken mainly between the figures for trends, but also turnover, for the industries which are of interest in this context. However, it may be difficult to make comparisons because the variables collected in the material are valued



differently. For example, VAT is included in the data for the turnover statistics, whereas the business statistics are recorded exclusive of VAT.

In the annual calculations use is also made of a range of other detailed information for different goods and services. This may involve, for example, records from government bodies, trade associations and non-profit institutions, or from supervisory bodies performing monitoring functions, collecting charges or awarding grants in relation to the scale of an activity. Register material and intermittent surveys as well as survey reports on different activities are also used.

The Swedish national accounts are based on an input-output system, which means that all production and use of goods and services is arranged in a system of product group balances in commodity flow analysis. In this way it is possible to check the household consumption estimates and other uses against the supply of the corresponding goods and services. If there are differences between supply and use, a residual item arises, and the good or service in question is then subjected to special analysis and any measures required are taken to ensure a better balance between supply and use.

The product group balancing technique means that benchmarks in household consumption may be affected. In the benchmarking one important criterion for the evaluation of sources chosen was the results given by the product balance reconciliations.

The calculations for the energy consumption of households are undertaken in the special energy balances of the national accounts. Statistics for petroleum products are available from a variety of sources, and these are coordinated in five different product balances, in which the allocation to different user groups is specified.

Analysis, reconciliations and adjustments are thus carried out for all of the 249 product groups, which constitute the smallest building blocks of household consumption distributed by purposes.

### **5.7.7 Description of the detailed calculations**

The calculation methods are described below, purpose by purpose. The main emphasis in the description is on the production of annual data, but the quarterly calculations are also touched upon. The presentation follows the classification by purposes. Note that the consumption of households classified by purposes contains both the consumption of resident households in Sweden and the consumption of non-resident tourists, diplomats etc. in Sweden. The adjustment items for the latter are shown at the end of the presentation, indicated in lump-sum terms since the information is insufficient to allocate foreign exchange amounts to individual purposes.

#### **COICOP 01, food.**

The calculations for the consumption of food, non-alcoholic beverages, medium-strength beer and light beer are based on an annual survey called *Food sales*, which contains detailed sales information and data from the VAT Register. The most detailed material out of the cash receipts from a handful large retailing chains, which represent 85 percent of total food sales, is put together and used for the breakdown of food and non-alcoholic beverages. The total value of sales is collected from the VAT material since food has a special VAT-rate on 12 percent. The National Board of Agriculture Additions calculates producers' own consumption of food and this estimate is added. According to Swedish

law farmers have to pay VAT on own consumption. Hence the farmers' own consumption is valued including VAT. A calculation over what food retail traders and owners of restaurants take out from their business is also added and also black consumption of poultry and fish.

Sources: turnover statistics, the VAT Register, SBS, collected special material from the retail trade organisations.

**COICOP 021, alcoholic beverages.** In Sweden the Swedish Alcohol Retailing Monopoly (Systembolaget AB) controls the sale of strong beer, wine and spirits to consumers. Data on the sales value are collected continuously from quarterly reports of Systembolaget. The HBS value for these goods indicates a substantial underestimate.

The production of illicit distilling and a trade margin for smuggling are calculated and added.

Sources: data on Systembolaget's sales to consumers, quarterly reports. Survey on origin of alcohol consumed by Stockholm University, SoRAD

**COICOP 022, tobacco.** This purpose comprises both tobacco and snuff. Swedish Match controls distribution to retailers and supplies sales value data for the national accounts too. The HBS value for these goods indicates a substantial underestimate.

A trade margin for smuggling is also calculated and added.

Sources: data from Swedish Match on distribution to retailers, quarterly survey, tax records. Survey on origin of tobacco consumed by Stockholm University, SoRAD

**COICOP 0230, narcotics.** The model is based on information about numbers of consumers and prices. Prices are collected yearly by The Swedish Council for Information on Alcohol and Other Drugs. Number of consumers 2001 is based on a report from The Swedish National Council for Crime Prevention made by Granath, Svensson and Lindström. The numbers of consumers have been extrapolated by information from the yearly report by the Swedish National Drug policy Coordinator.

Sources: The Swedish Council for Information on Alcohol and Other Drugs. The Swedish National Council for Crime Prevention. The Swedish National Drug policy Coordinator.

**COICOP 03, clothing and footwear.** Apart from clothing and footwear, the purpose also comprises garment fabrics and the repair and hire of goods. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate was considered too low.

Sources: turnover statistics, the VAT Register, SBS, industrial statistics.

#### **COICOP 04, Housing.**

**COICOP 0411, tenancies in multiple-occupancy buildings.** The purpose comprises rental costs, excluding heating costs, of rented apartments. The calculation is carried out by the help of the dwelling area according to the national estate taxation register and rent per square metre according to the Rents for dwellings (HiB). Heating costs are deducted according to the calculations made in the comprehensive energy balances. For all years, the calculations are stratified for different strata, such as owner, year of construction, region and apartment size. The estimate is also corrected for the value of unlet apartments.

Because the information on rental income refers to rentals for heated accommodation, the heated accommodation rental of households is calculated first. Unheated accommodation rental is obtained residually as heated accommodation rental less heating costs (for sources, see fuel calculations applicable).

Sources: National Estate Taxation Register, Number of unlet apartments (BOSM), HiB.

**COICOP 0412, tenant-ownership rights in multiple-occupancy buildings.** A holder of a tenant's right of ownership does not own his apartment but holds a share in a tenant-owners' association. The task of the tenant-owners' association is to assure on-going maintenance of the building etc. For this the holder pays a charge to the association, which is somewhat lower than corresponding rentals for ordinary tenancies. As holders of tenant-ownership rights do not rent their apartments, a utility value representing residence in a tenant-owner's apartment is calculated by applying the rental cost per square metre for ordinary tenancies of an equivalent standard. Otherwise the calculation is carried out according to the same principles as for COICOP 0411 Tenancies in multiple-occupancy buildings.

Sources: National Estate Taxation Register, HIB.

**COICOP 0421, Own home.** According to international recommendations, a utility value has to be estimated for the residence of a person in his own home. Thus it is not the household's expenditure for living in their own home, which is calculated, but instead an alternative cost which indicates how much they would have paid if they had rented the accommodation. In Sweden it is not common for individual houses to be let, hence there is no basis for estimating the utility value with the aid of actual rental costs for individual houses. Instead the level is ascertained with the aid of rental costs per square metre in multiple-occupancy buildings of a corresponding standard. A supplement is also included for access to a garage.

In the same way as for multiple-occupancy houses, the number of individual houses is collected from the National Estate Taxation Register. The estimate is calculated using information on the number of individual houses, rental for garages, taken from the IKU, and average area and rental per square metre, collected from the HiB and HEK. Regional stratification as well as stratification on year of construction and on dwelling size is used in the calculations.

The rental for unheated accommodation is obtained residually as the heated accommodation rental less heating costs. Since the utility value is defined as corresponding to the rental for tenanted apartments, the unheated-accommodation rental is calculated by subtracting the heating cost per square metre for the rented apartment from the heated accommodation rental.

Sources: National Estate Taxation Register, IKU, HiB, HEK

**COICOP 0422, Holiday/weekend homes.** For holiday and weekend homes the user-cost method is used. The output is calculated as the sum of costs at current prices for services (refuse collection, water and chimney-sweeping), insurance services, repairs and maintenance, FISIM, real estate tax, consumption of fixed capital and net operating surplus. The net operating surplus is measured by applying a real rate of return of 2.5% to the value of the stock at current prices. The service charges for refuse, water and chimney sweeping are calculated by extrapolating the household budget data from HBS-92.

Insurance expenses on individual houses and holiday/weekend homes are calculated on a yearly basis. The share of holiday and weekend homes of the total insurance services is estimated with the aid of the corresponding tax assessment value for holiday homes. Repairs and maintenance are obtained from a model taking the housing and rental survey (HiB) as its source. Consumption of fixed capital is calculated from the figures for stocks of fixed assets

Sources: HBS, HiB, National Estate Taxation Register.

**COICOP 0431.** The purpose comprises goods and materials for minor repairs and maintenance to the home. Materials intended for permanent and holiday/weekend homes are also included in this group. The work is carried out by the household living in the home and no cost or reporting of time taken up is included. Examples of minor works are interior decorations and repairs, such as wallpapering and painting. The initial value for 1995 was obtained from the household budget statistics (HBS) through thorough analysis of the expenditures that households had stated that they had had. The value is updated with the aid of the trend in retail trade turnover at current prices per quarter.

Sources: HBS, turnover statistics, the VAT Register, SBS.

**COICOP 0432.** The purpose comprises expenditure for minor maintenance and repairs carried out by hired trade's people. The costs of both work and materials are recorded here. The initial value for 1995 was obtained from the household budget statistics (HBS). The value is updated with the aid of the trend in retail trade turnover at current prices per quarter.

Sources: HBS, turnover statistics, the VAT Register, SBS.

**COICOP 0451, Electricity.** The annual national accounts include an electricity balance in which the supply is reconciled with total use, broken down by different user categories. The survey of electricity, gas and district heating also includes current price values for various user groups. A comparison of the survey's unit prices for household consumption (both in terms of level and trend) with CPI data reveal large discrepancies which are analysed. The survey is based on responses from electricity producers and non-response/under-coverage is handled through the assumption that these producers have the same price as companies that responded to the survey. The outcome of these investigations tends to be in favour of the price trend according to the CPI and the survey prices are often subsequently revised as a result. The most common procedure for calculating the value at current prices is therefore to multiply the quantity consumed with the price according to CPI.

Sources: Electricity balance for Sweden, NA. Annual survey of electricity, gas and district heating, CPI for electricity, tax rates from The Swedish Tax Agency, tax revenues from The Swedish National Financial Management Authority.

**COICOP 0452, Gas.** The annual calculations are based on data on the consumption by households of town and natural gas in cubic metres ( $m^3$ ) according to statistics developed by Statistics Sweden in the programme for energy. Data are obtained from this source on total supplies in  $m^3$  and sales values. A cubic metre price for each gas type is calculated, and this is multiplied by household consumption in  $m^3$ . In the national accounts a gas balance is also produced for the country, in which supply is reconciled with use broken down by the various user categories.

Sources: gas balance for Sweden, NA, SCB monthly statistics on supply of natural gas.

**COICOP 0453, Liquid fuel.** This item comprises light and heavy fuel oils, propane and light oils. The annual calculation is based on the energy balances in the national accounts, in which data on quantities and values are calculated and reconciled. Consumption by households of heating oil and other energy, in cubic metres, is obtained from Statistics Sweden's energy statistics for individual houses, multiple-occupancy buildings and commercial premises. By reconciliation with supply data according to Statistics Sweden's fuel statistics, purchases of above mentioned products by household are obtained. These quantitative data are multiplied by the price according to CPI.

Sources: Energy balances for Sweden, SCB annual energy use data.

**COICOP 0454, Other fuels.** The purpose includes the household consumption expenditures on grilling charcoal, wood and pellets, of which expenditures on pellets constitutes the largest share. Grilling charcoal is benchmarked in 1995 and extrapolated by volume change of the imported quantity and price index for domestic supply (IHT) to yield the value of household consumption in current prices. For household expenditures on wood, values are compiled by the help of quantities given in Statistics Sweden's annual survey Energy Statistics for Multi-dwelling Buildings multiplied by the price index for domestic supply. The latest benchmark is 2002. The household expenditure on pellets is benchmarked in 2003 and extrapolated by using the volume change from Pelletsindustrin, a special interest organization for producers of pellets multiplied by yearly pellets' prices from The Swedish Energy Agency.

Sources: Foreign trade statistics, The Swedish Energy Agency, Pelletsindustrin

**COICOP 0455, District heating.** The annual calculations are based on data on the consumption by households of district heating in GWh according to SCB electricity and district heating statistics, SCB annual electricity, gas and district heating statistics and SCB statistics for individual houses, multiple-occupancy buildings and commercial premises. Total deliveries to final consumers and the sales value give a unit-price per GWh which, when multiplied by the district heating consumption of households, gives current prices for the year in question. A heat balance is also undertaken for the country each year in the national accounts, in which supply is reconciled with use broken down by different user categories.

Sources: Heat balance NA, SCB electricity and district heating statistics.

**COICOP 051, Furniture, fittings, rugs and carpets etc.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate and the Retail trade estimate was the same.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 052, Household textiles.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate was a little bit higher than the Retail trade estimate.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 053, Household appliances.** The purpose includes all small household appliances, repairs, and a certain proportion of major household appliances. The initial value for the small household appliances is from the Retail trade sales 2002 and the initial value for the repairs is from the HBS 2004. A large proportion of purchases of larger

household appliances consist of investment purchases of fridges and freezers, cookers and washing machines. In Sweden the majority of these goods is already included in dwellings on construction as new and therefore constitutes part of housing investment. Purchases to replace appliances at the end of their service lives are undertaken by the dwelling owner and the cost for the replacement is included in the rent amount. The household's expenditure on these goods is therefore covered by the purpose Housing and not that of Household appliances. Due to this fact the HBS estimate is also considerably higher. The proportions that are used to calculate *the consumption* of the major household appliances are from 1995 and were determined with the aid of a detailed analysis of purchases recorded in the household budget statistics. The goods constituting household consumption under this purpose thus consist of appliances that did not form part of the original investment. Examples might be purchases of extras such as microwave ovens and other household appliances, which are usually not original fixtures in the dwelling. However not all dwellings have exactly the same equipment, so that a certain proportion of such appliances, for example washing machines and chest freezers, have been included under this purpose. All smaller household appliances, such as toasters, vacuum cleaners, electric irons, coffeemakers and sewing machines, are of course included under the purpose to their full value.

	Consumption
Fridges, freezers	25%
Dishwasher	25%
Washing machine	25%
Drier, drying cabinet	25%
Stove	0%
Microwave oven	100%
Fan	100%
Radiator	100%
Cleaning machines	100%
Vacuum cleaner	100%
Vacuum cleaner, accessories (not vacuum cleaner bags)	100%

Reconciliation was performed with investment in the housing sector, in which products were broken down as to "fixtures" of the dwelling and products constituting added equipment. The initial value for the larger household appliances was updated in 2004 with the HBS and the proportions from 1995. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: Retail trade sales, household budget survey.

**COICOP 054, House wares.** The initial value for 2002 was based on the survey Retail trade sale 2002. In the NA balancing process the estimate was however revised. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate was a little bit higher than the Retail trade estimate.

Sources: SBS, turnover statistics, the VAT Register.

**COICOP 055, Tools and equipment for home and garden.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate was a little bit higher than the Retail trade estimate due to inconsequent classification in the HBS. An update has been made for later HBS.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0561, Non-durable household goods.** The initial value for 2004 was obtained from the household budget statistics (HBS). The value is updated with the aid of the trend in retail trade turnover at current prices per quarter.

Sources: HBS, turnover statistics, the VAT Register, SBS.

**COICOP 0562, Domestic services and household services.** The initial value for 2004 is for the most part based on the information of the customer information in the SBS. Added are partly a value for the own consumption of domestic services by self-employed persons and partly a calculation for “black” au pairs.

Sources: SBS, household’s finances.

**COICOP 06111, Prescription medicines.** Prescription medicines in Sweden are only sold through Apoteket AB. These medicines carry substantial subsidies for the private consumer. The subsidy system is based on a graduated scale and imposes a maximum amount per person in any one year. Only the amount that is actually paid by households is included in household consumption. See above in the section on the demarcation between private and general government consumption. Data on sales to households and the subsidy constituted by the refunds from general government to the pharmacist are obtained quarterly from Apoteket AB. The annual calculations are reconciled with data from Apoteket’s annual accounts.

Sources: Apoteket AB.

**COICOP 06112, Non-prescriptive medicine** The calculation is made on an annual basis. The information comes from data on sales from Apoteket AB, who sell a large proportion of the Non-prescriptive medicine in Sweden. This data is combined with the Retail trade sales survey.

Sources: Retail trade sales, turnover statistics, Apoteket AB.

**COICOP 0612 health care preparations, medical products** The initial value for this purpose for 2002 is based on the survey Retail trade sale 2002. Reconciliation is also carried out with Apoteket’s records, since many of the products under this purpose are sold via Apoteket. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: Retail trade sales, Apoteket AB, turnover statistics

**COICOP 0613 spectacles, lenses, etc.** The initial value was benchmarked in 1995 with the aid of the HBS 1995 and information from the trade organisation. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: Retail trade sales, Apoteket AB, turnover statistics

**COICOP 062, Out-patient medical care.** This purpose includes the charges paid by the patient himself for out-patient attendance and treatment and for dental treatment. Annual data on publicly financed and provided care is obtained from the summary accounts of the Federation of Swedish County Councils, which also show revenue from patient charges. Data on charges collected by private operators are based on the customer breakdown from the SBS 2004. Additions are made for hidden activities. Sources: Federation of Swedish County Councils, summary accounts of the primary municipalities, SBS, RFV, annual accounts of private operators.

**COICOP 063, Hospital care.** For publicly financed treatment provided in the public sector, data are obtained from the records of the Federation of Swedish County Councils and primary municipalities on revenue received in the form of patients' contributions. The calculation of contributions for treatment not provided within the public sector is based on the customer breakdown in the SBS 2004.

Sources: records of the Federation of Swedish County Councils on contributions received and SBS.

**COICOP 0711, Motor cars.** Consumption by households of motor cars consists partly of purchases of new cars and partly purchases of used cars from a sector other than that of households. A supplement is also included covering the margins of the motor trade for used cars purchased by households through the motor trade and previously owned by another household. The supplement consists of the margin charged by the motor trade for the resale of the used car.

Car ownership and new car purchases are registered by personal code number or corporate identification number in the motor car register. By comparing the motor car register with Statistics Sweden's enterprise register, those cars which are owned by natural persons who are also self-employed traders can be filtered out. Cars purchased by unincorporated enterprises with an annual income of over SEK 200 000 are not included in household consumption but are entered as investment in the national accounts. For investment vehicles (service cars) which are also used privately the entrepreneur must record a benefit value for taxation, and this procedure is disadvantageous unless the car is used a lot for the purposes of the business. The above-mentioned income threshold is used, as it is unlikely that a self-employed trader below this annual income level would charge the purchase of a car to his business; it is more likely that he would record the costs of using his private car in the course of his business.

The data in the motor car register also include the make and model of the car and month of manufacture, as well as the owner. BIL Sweden compiles price data for different car models and, on the basis of this information, values are calculated at current prices for new car purchases. Price data for transfers of car ownership from legal to natural persons are calculated with the aid of a model in which data are used on the age of the cars and the corresponding value reduction in relation to new car prices. The model was devised after consultation with the motor trade. It is mainly previously leased company cars that are covered in this group.

Every quarter a value calculation for cars newly registered to natural persons, cars transferred from legal to natural persons and cars sold by one household to another household through the motor trade is carried out with the aid of SCB processing operations based on the motor car register in combination with the enterprise register and price data. The calculation of transferred ownership implies an assumption that no cars owned by legal persons are scrapped.

The value of the motor trade's margins on the resale of used cars from household to household is calculated with the aid of quantitative data (including models and age) from the motor car register and a percentage mark-up on used car prices.



Direct import of certain used cars. After Sweden became a member of the EU in 1995, it became advantageous to import used cars directly. The term “used” in this context refers to a car that has been driven for 6000 kilometres and is six months old. Data on the number of directly imported cars is obtained from the new registration statistics. The national accounts calculate a value for these cars by applying to them a standard reduction on the new car prices for the makes in question. The value of direct imports is deducted from purpose 0711, since it is already included in the foreign exchange item included under purpose 15.

The HBS includes sales between households and is therefore not appropriate to use for comparisons without adjustments.

Sources: Motor car register, SCB enterprise register, NA car model

**COICOP 0712, Motor cycles etc.** Apart from motor cycles, the purpose also includes motor-cross cycles, snow scooters and mopeds. The initial value is calculated for 1993, when a very detailed calculation was carried out for motorcycles covering numbers and price data per make and cylinder capacity. Other vehicle types were also calculated with the aid of data on numbers and sale prices according to records from the trade. A calculation is performed each year with the aid of data from the vehicle register and new registration data and price information from the trade.

Sources: vehicle registers registration statistics

**COICOP 0713, Bicycles.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0721, Spare parts and accessories.** The HBS value for 2004 is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0722, Petrol, diesel, lubricants.** The annual calculation is based on the energy balances in the national accounts, in which data on quantities and values are calculated and reconciled. In the balances consumption by households in cubic metres is obtained. Products under this heading are ethanol, gasoline, diesel and lubricants. The quantitative data are multiplied by the price per unit with subseries from the CPI. For lubricants, which are a very small item, a calculation is carried out with the aid of information from the trade.

Sources: monthly delivery figures, petroleum balance, NA, Turnover statistics

**COICOP 0723. Maintenance and repairs.** The initial value for 1995 was calculated with the aid of the Swedish Consumer Agency’s car repair survey of 1995. This survey covered about 12 000 vehicles. The car repairs are calculated with a model containing a breakdown by insurance repairs and repairs paid for directly by households. Repairs made on own account and by friends were also covered. Data on the number of insurance policies and claims settled were obtained from statistics of the Financial Supervisory Authority. Extrapolation is carried out using the production of repairs from the SBS. The HBS estimate 2004 represents only 40 percent of the NA present estimate.

Sources: Swedish Consumer Agency's car repair survey 1995, insurance company records of claims settled in motor vehicle and road accident insurance business in accordance with FM 12 SM, Financial Supervisory Authority. Turnover statistics, the VAT Register, SBS.

**COICOP 07241, Driving schools, registration fees and driving tests.** The initial value for 1995 is calculated with the aid of the number of driving tests passed and the average price per pupil. The amount obtained was reconciled with the turnover recorded in the industry according to the SBS. Information on driving tests is obtained from the National Road Administration. The value for 1995 is updated with the aid of the trend in SBS. Comparisons are also continuously made with trend indications for the industry from the VAT Register.

Sources: National Road Administration, SBS, the VAT Register.

**COICOP 07242, Vehicle inspection and testing.** Both quantity information and price data are obtained from a quarterly survey of the Swedish Motor Vehicle Inspection Company (AB Svensk Bilprovning), the only agency authorised to conduct official vehicle inspections. The data also includes follow-up tests. The value is obtained through multiplying data on the number of vehicles with data on the price per vehicle.

Sources: AB Svensk Bilprovning.

**COICOP 07243, Other services in respect of personal transport equipment.**

This purpose covers charges paid by households to drive across the bridge between Malmö and Copenhagen opened on 1 July 2000. The charges are calculated with the aid of records of the Öresund Consortium on traffic volumes and charges. In 2005, the charges for the new Svinesund Bridge between Sweden and Norway have been added. The benchmark is from 2004 and is continuously updated with revenues from traffic over the bridge.

Sources: Öresundskonsortiet.

**COICOP 07244, Parking not assigned to dwellings.**

The purpose consists of chargeable parking on streets and squares and in parking garages. Parking services is provided by both local government agencies and by private operators. The parking services produced by local government are fully covered in the local government finance statistics which is an annual benchmark. The SBS contains information on the private part. Out of this the share of households was benchmarked in 1995 on the basis of a special survey for the industry in question. Information about the annual rate of change in the production of parking services from the SBS is used to extrapolate.

Sources: VAT statistics, Local government finance statistics, SBS.

**COICOP 07245, Car benefit and car hire.** The purpose consists primarily of the value recorded by households for the benefit of using a company car for private purposes. The amount is partly obtained annually from the income statement information supplied by employers to the Swedish Tax Agency. However since 1997 an addition is made to the Tax Agency estimate, because of the introduction of a new method see paragraph 3.3.1. The car benefits, included here, is a benefit in kind. The same amount is also recorded as employers' output and as a payroll expense.

The purpose also includes the short-term hire of cars and motorcycles to households. For the hire of cars the initial value is based on HBS95 and is updated with the aid of trend figures from the SBS.

Sources:

Car benefits: data from income statements provided by the Swedish Tax Agency.

Car hire: turnover statistics and SBS.

Motorcycle hire: data from the SBS.

**COICOP 0731, Railway transports.** Household consumption of railway services is calculated as the share of private travelling, estimated in the travelling survey. The total amount of production is collected from the SBS and the household consumption share has been collected from the largest company in 2004.

Sources The VAT Register, turnover, SBS, travelling survey.

**COICOP 07321, Taxi transport.** The purpose consists of taxi journeys, which are paid for by private households, in other words business travel and mobility services are not included. The fraction of charges for mobility services paid by private individuals is assigned to the purpose Elder-care charges. The benchmark for the consumption of taxi journeys is based on HBS 1995; the item is subsequently calculated with the aid of the output trend for the industry.

Sources: VAT statistics, turnover, and SBS.

**COICOP 07322, Long-distance bus transports.** The initial value is based on HBS 1995. Updating is carried out with the aid of total value of tickets sold according to the SBS.

Sources: the VAT Register, turnover, SBS.

**COICOP 0733, Air transport.** The purpose comprises the consumption by households of air transport journeys with Swedish airlines, excluding charter flights abroad, which are covered by purpose 0960. Journeys by foreign airlines are recorded as Swedish tourist expenditure abroad. The share of households in the total supply of air transport services by Swedish companies is calculated as a percentage. The initial value for 1995 was calculated from data in the companies' annual accounts. These were supplemented by a survey of the distribution between private and business travel from the fare tariff.

Sources: Civil Aviation Administration.

**COICOP 0734, Sea transport.** The expenditure covers vessels in inland and foreign trades, operated by a Swedish shipping company. For the initial value for 2004 the source is the customer information in the SBS. Estimates are made annually using the number of passengers from SIKA. Purpose 0734 does not cover all journeys by boat made by Swedish households. If a Swedish individual travels on a boat operated by a non-resident shipping company, the cost is not assigned to this purpose but is recorded as Swedish tourist expenditure abroad.

Sources: Turnover statistics, SBS, Swedish Institute for Transport and Communications Analysis (SIKA)

**COICOP 0735, Public transport.** A benchmark value for the year 2004 was determined by using data on the customer distribution from the SBS. The value was also reconciled with SLTF records. The Swedish Local Traffic Association (Svenska Lokaltrafikföreningen, SLTF) is the cooperation body of regional transport executives. Updating is carried out with the aid of total value of tickets sold according to the SBS. The value of tickets sold by local government has been added.

Sources: SBS, turnover, VAT Register, SLTF.

**COICOP 0736, Other purchased transport services, e.g. removals.**

A benchmark value for the year 2004 was determined by using data on the customer distribution from the SBS. Updates are made by the tend in SBS.

Sources: SBS, turnover, the VAT Register.

**COICOP 0811, Postal services.** The purpose consists of the expenditure of households for the carriage of letters, cards and packets. Deposits, withdrawals, bill payments or other services performed by Svensk Kassaservice (Swedish Cashier Service) are not a postal service but are classified as a financial service, although Svensk Kassaservice is owned by the Post Office, which in March 1994 was converted into a company limited by shares under the name of Posten AB. Earlier, it was possible to make postal giro payments over the counter at the Post Office. This was not considered a postal service but was classified as a financial service.

A benchmark value for the year 2004 was determined by using data on the customer distribution from the SBS. The share of the production of postal services that is sold to households in the SBS is applied to the calculated total production of postal services in the National accounts. This benchmark value is then extrapolated using data from a report by SIKa (Swedish Institute for Transport and Communications Analysis) on the number of letters sent. Similar information in the annual report of the Post Office can also be used.

Although the monopoly of the Post Office for the carriage of mail ceased in 1994, Posten AB is still the dominant enterprise in the area.

Sources: Annual reports, SBS, report from SIKa

**COICOP 0812, Telephone and telefax equipment.** The initial value is based on HBS 1995 and statistics recorded by the trade organisation. Expenditure for the purchase of equipment is projected with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, industry reports from the trade organisation of mobile telecommunications equipment suppliers (Mobilteleleverantörerna, MTL).

**COICOP 0813, Telecommunications services.** The purpose comprises expenditure on both fixed and variable charges for fixed and mobile telephony, fax and internet communications. The value is benchmarked 2004 and is extrapolated continuously with the aid of quarterly figures from operators in the field that separates household consumption and intermediate consumption and turnover statistics.

Sources: The Swedish Post and Telecom Agency (PTS), telecommunications operators, annual data from the industry, SBS, Swedish tax agency.

**COICOP 0911, Equipment for the reception and playing of sound and pictures.** The purpose comprises purchases by households of tape and disc players, radio, TV, stereo and video devices etc. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate was considered too low.

Sources: turnover statistics, the VAT Register, Statistics from the trade organisation.

**COICOP 0912, Photographic and cinematographic equipment and optical instruments.** The goods covered by this purpose are cameras, binoculars and

microscopes. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0913, Information processing equipment.** As well as PCs with accessories, the purpose also includes pocket calculators and typewriters. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0914, Recording media.** The purpose includes, amongst others, CDs, camera film, cassette and video tape and CD recordings. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0915, Repair of audio-visual, photographic and information processing equipment.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0921.** It has been discovered that the HBS value for 0921 contains a large proportion of consumption that belongs in COICOP 0923. The HBS value and the value in NA are therefore not comparable.

**COICOP 09211, Caravans and trailers.** Purchases by households of caravans are calculated with the aid of the SCB statistics on the number of new caravan registrations. New registrations are obtained per quarter from the vehicle register. A detailed study was carried out for 1994 of newly registered caravans broken down by manufacturer, model and price data on the caravan types concerned. This level is subsequently updated per quarter with the aid of the number of new registrations, and the CPI for caravans is used for reflation to current prices. Annual data on sales are also recorded by the trade. These data are reconciled with new registrations and the price trend measured. A small proportion of newly registered caravans is purchased by legal persons and is included in trailer investment. At the same time a small proportion of newly registered trailers are purchased – e.g. for horse transport – by private persons and are thus included in household consumption. The proportions come from statistics Sweden vehicle register that covers ownership of the population of caravans and ownership of new registration of caravans and trailers.

Sources: the vehicle register, Husvagnsciceron (caravan guide), annual edition.

**COICOP 09212, Boats.** The whole-year value is obtained by a NA balance calculation, It consists of production less exports plus imports, trade margins and VAT of pleasure boats. The sources for the calculations are the SCB industrial, turnover and international trade statistics. Production in enterprises with fewer than 10 employees, which are not included in the industrial statistics, is estimated with the aid of the VAT Register.

HBS2003-2005 gave an estimate that is higher than the data calculated with the aid of the

product-by-product reconciliation in the national accounts. In the HBS is however transactions between households also included.

Sources: international trade, turnover, industrial statistics, VAT-register.

**COICOP 09213, Boat engines and other equipment for boats.**

The initial value is based on HBS 2003-2005. Updating is done with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, SBS.

**COICOP 09214, Riding horses, ponies.** The initial value for 1995 is based on a calculation of the number of foals born and average prices. The purpose includes live-born foals per year of light and heavy stock and ponies. Trotting horses and thoroughbreds for flat-racing are not included.

Annual data on the number of foals are recorded by the Swedish Horse-Breeding Association (Svenska Hästavelsförbundet). Reflation to current prices is carried out through the total CPI.

Sources: Swedish Horse-Breeding Association

**COICOP 09215, Other major durables for recreation.**

The purpose includes such items as surfboards, diving gear and golf accessories. The initial value is based on HBS 1995. The HBS value is updated with the aid of trend figures per quarter from turnover statistics.

Sources: turnover statistics, SBS.

**COICOP 0922, Musical instruments and major durables for indoor recreation.** In addition to musical instruments the purpose also includes, items such as billiard and table-tennis tables, exercise bicycles and other gymnastic equipment. The initial value for 1995 is based on the survey HBS 1995. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS, HBS.

**COICOP 0923, Repair and maintenance of durables for recreation.**

For the repair of pleasure boats, motor caravans and musical instruments the initial value for 1995 is based on a product classification for the repair industry drawn from an intermittent survey of household repairs. Updating is carried out using trend figures from the turnover statistics at current prices per quarter. For veterinary services for horses and ponies used for recreational riding the initial value for 2004 is based on SBS.

Sources: turnover statistics, SBS, the VAT Register.

**COICOP 0931, Games, toys and hobbies.**

The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0932, Equipment for sport, camping and open-air recreation.** The purpose includes sport articles, such as balls, rackets, frisbees, croquet accessories, skis, golf clubs and dumbbells. Fishing and camping gear, including sleeping bags and rucksacks, are also included. Weapons and ammunition are also counted here. The initial value is based on

HBS2003-2005. Quarterly updating is carried out with the aid of trend figures from the turnover statistics at current prices.

Sources: turnover statistics, SBS.

**COICOP 0933, Gardens, plants and flowers.** The purpose includes seeds and bulbs and both natural and artificial flowers and plants. In addition all auxiliary materials and accessories, such as soil, fertiliser, pesticides and pots, are included. Christmas trees are also entered in this group. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics, the VAT Register, SBS.

**COICOP 0934, Pets and related products.**

Various sources have been used for the sub-items in this purpose. The initial values for 1995 are based on the household budget survey as regards pet-food and accessories. But, since the Swedish Board of Agriculture has the task of monitoring the content of pet-food, it also collects statistics on domestic consumption. These volume data are used in the annual calculations, and reflation is carried out with a partial index from the CPI.

Regarding the purchase of animals, on the other hand, the HBS estimate was considered too low. Calculations were mainly carried out on the basis of the material available in a research report from the Swedish University of Agricultural Sciences of 1995, known as the Manimalis Report. Data on medicines were obtained from the records of Apoteket for veterinary medicines. A breakdown of medicinal expenditure was carried out for pets and for animals in commercial activities. It was possible to make comparisons with the HBS estimate. A quarterly update of the entire purpose is carried out with the aid of trend figures from the turnover statistics at current prices.

Sources: turnover statistics, annual feed statistics from the Swedish Board of Agriculture, Apoteket AB, the Manimalis Report from the Swedish University of Agricultural Sciences.

**COICOP 0935, Veterinary services and other services for animals.**

Apart from veterinary services for pets, other services such as clipping, horse-shoeing and boarding facilities are also included.

The initial value is based on HBS 1995. Updating is carried out with the aid of the SBS.

Sources: SBS, HBS 1995.

**COICOP 09411, Sport and recreation services.**

The purpose includes entry charges, for example, to riding, trotting and sports events and to entertainments, zoos, amusement parks and playgrounds. The initial value for 2004 is based on SBS. Quarterly updating is carried out with the aid of the VAT Register.

Sources: the VAT Register, SBS.

**COICOP 09412, Charges for the hire of sport equipment and for participation in sport activities.**

The initial value 2004 is based on consumer information in the SBS.

Quarterly updating is carried out with the aid of the VAT Register.

Sources: turnover statistics, the VAT Register.

**COICOP 09413, Charges hire of PC, etc.** This includes the expenditure of households for hire of boats, berths in marinas, laying-up costs for winter storage and charges for the

use of locks and canals. The benchmark 2004 is set with the aid of consumer information in the SBS. Quarterly updating is carried out with the aid of turnover statistics and the VAT Register.

Hire of PCs is also included in this purpose. PCs can be hired from sales outlets in the trade and also by way of financial leasing. The majority of hired PCs have a different explanation, however. With the intention of increasing the PC skills of the population, a scheme was set up at the end of 1998 for an employee to hire a PC from his employer for 36 months in return for an agreed concessionary charge to the employee. The concessionary charge is deducted monthly from the employee's gross pay. When the period of hire has expired, the employee must be given the opportunity to purchase the machine at its residual value. Under this scheme the employee can obtain a PC at a lower price, since the employer is able to deduct the VAT on purchased goods in his accounts. The employer gains from the fact that the staff acquires PC skills in their spare time, which benefits the employer through the more effective use of PCs during working hours. The expenditure of households for the hire of the PCs is covered under this purpose. At the same time the same amount is treated as a pay-related benefit. The recording in the annual accounts follows the same principle as that applicable to car benefits. The value at current prices is calculated taking the number of machines times the average monthly amount.

Sources: turnover statistics, the VAT Register, SBS, local government summary accounts.

**COICOP 09414, Municipal music school fees.** The consumption consists of fees to pupils for singing and instrument tuition and for the hire of instruments at municipal schools of music. The source for the annual calculations is the local government finance statistics. These records specify the fees paid by pupils to the local authorities, which consist of consumption by households. Data may also be obtained via the Swedish Council of musical and cultural schools (Sveriges Musik- och Kulturskoleråd, SmoK). Sources: Sveriges Musik- och Kulturskoleråd (SmoK), summaries of local government accounts.

**COICOP 09415, Course fees of adult education associations.** The expenses of households for study circles and lectures arise mainly from the sale of education by non-profit organisations. Benchmarking was carried out with the aid of data obtained from the Adult education council in 1997 (Folkbildningsrådet), which amongst other things compiles records for the expenditure of the various adult education associations. Extrapolation is made by the number of participants according to the Adult education council and reflat by CPI. One school, Bibelschool (Bibelskolan) is not covered by the data of the Adult education council. In this case data is from the SBS. Sources: Folkbildningsrådet, SBS

**COICOP 09421, TV licences.** Data on TV licences are obtained via a quarterly survey for the Swedish Broadcasting Corporation (Radiotjänst). The figures cover the number of fees, the annual fee and the value at current prices. Source: Radiotjänst.

**COICOP 09422, Cable and satellite TV.** Consumption of these services is calculated with the aid of the detailed annual survey of the industry carried out by Statistics Sweden since 1996. The charge recorded covers the total cost paid by subscribers, irrespective of whether the amount is included in the dwelling rental or is paid separately. Sources: annual SCB survey of the industry, the VAT Register, SBS.



**COICOP 09423, Photographic services.**

The purpose includes services such as portrait photography and processing of customers' films. The initial value 2004 is based on consumer information in the SBS. Updating is carried out with the aid of trend figures from the turnover statistics at current prices per quarter and continuous reconciliation with records from the trade.

Sources: turnover statistics, the VAT Register, SBS, National Association of Swedish Photographic Dealers.

**COICOP 09424, Hire of equipment etc.** The purpose includes hire of equipment and accessories such as TV and video sets and video films. Also recorded here are hire of musicians and other entertainers for private functions. The initial value for this consumption is based on consumer information from the SBS 2004. Updating is carried out with the aid of trend figures from the turnover statistics at current prices per quarter. Sources: trade records, SBS, turnover statistics, the VAT Register.

**COICOP 09425, Cinema.** Information on the expenditure of households for cinema visits is obtained from the records of the Swedish Film Institute. Data on the number of tickets sold are continuously recorded. The annual records also contain information on total ticket revenue. The material is developed as a basis for the 10 per cent levy on gross ticket revenue that must be paid to the Film Institute.

Sources: Swedish Film Institute.

**COICOP 09426, Entrance fees at museums, library fees.** The initial value is based on the consumer information of the SBS from 2004. A rough reconciliation has been carried out with the records contained in the statistics on publicly operated institutions in the field. Libraries do not charge any fees for the loan of books; the fees recorded cover late returns and, where applicable, the hire of accommodation and entrance charges for theatrical and musical events, poetry readings and the like.

Sources: National Council for Cultural Affairs, SBS.

**COICOP 09427, Entrance charges at theatres, concerts, etc.** The purpose includes entrance charges at theatres and concert halls and for entertainments, concerts etc. Skansen in Stockholm is also included in this group. The initial value is based on consumer information in the SBS. A rough reconciliation has been carried out with the records available in the statistics on publicly operated institutions in the field. Updating is undertaken with the aid of trend figures from the VAT Register at current prices per quarter.

Sources: National Council for Cultural Affairs, SBS, turnover statistics, the VAT Register.

**COICOP 0943, Gaming.** Household consumption of gaming services comprises pools, tote betting, the lottery, casino gambling, bingo and bingo lottery games. The data are collected quarterly from the organisers, i.e. Svenska Spel, ATG and Bingolotto. The consumption of households is equal to the organisers' revenue minus winnings declared. Annual information is obtained from SBS. Only information on amounts spent by households on the various games is collected in the HBS and not on winnings paid out, so that comparisons with the HBS are not relevant.

Sources: SBS and quarterly surveys of major organisers.

**COICOP 0951, Books.** The purpose Books also includes course books paid for by students themselves. The initial value is based on retail trade sales 2002. This value is reconciled annually with the records of the Swedish Publishers Association. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: Retail Trade sales, Swedish Publishers Association, turnover statistics.

**COICOP 0952, Newspapers and magazines.** For the initial value an extensive calculation was done using quantitative data covering both the daily newspapers and the popular press combined with average prices for single copies and subscriptions for the dailies and the popular press. The initial value is from 1995. For the benchmark quantitative data from AB Tidningsstatistik was used. The data covers both the daily newspapers and the popular press broken down by single-copy sales and subscription sales. The quantitative data were multiplied by average prices for single copies and subscriptions for the dailies and the popular press in order to obtain the relevant consumption value. Extrapolation is carried out through calculations of the volume trend with the aid of data from Tidningsstatistik AB. The value in constant prices is reflatd with CPI.

Sources: AB Tidningsstatistik, quarterly surveys of newspaper distributors and publishers.

**COICOP 0953, Other printed matter.** The purpose includes posters, greetings cards and picture postcards, guide books and maps etc. The initial value for 2004 is based on the HBS 2004. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: Household budget survey, turnover statistics

**COICOP 0954, Stationery.** The purpose includes all types of stationery, exercise books, pens and drawing requisites, other accessories such as glues, clips, erasers, chalks, transparencies, pencil cases etc. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: turnover statistics.

**COICOP 0960, Package holidays.** The purpose comprises expenses of households for package tours, i.e. expenses for travel, hotels and other arrangements, which are included in the price of the trip are specified here. The costs to the individual traveller arising at foreign resorts are not covered here but are included in foreign exchange for travel under the heading Consumption of households abroad. The main sources are data collected in the SBS 2004 and data from earlier intermittent surveys of the industry in question in 2002. It is in principle the amount the traveller pays in Sweden for the journey that is included here. Quarterly updates are collected from the turnover statistics.

Sources: SBS, intermittent tourist industry data.

**COICOP 10, Education.** In Sweden education in schools as such is financed by taxation and does not therefore give rise to any personal fees or charges. On the other hand separate fees may be charged for items such as entrance examinations, and the expenditure of households for the university aptitude test is covered under this purpose. The number of participants and the rate of the fee are obtained from the National Agency

for Higher Education. Also covered here are from year 2003 the charges paid by households for voluntary activity in preschool (family day nurseries are recorded to COICOP 12401). Information on charges paid is obtained in the same way as for child-care, see COICOP 12401.

Sources: National Agency for Higher Education, summaries of local government accounts, the child-care survey, City of Stockholm.

**COICOP 10141, University aptitude test.** The expenditure of households for the university aptitude test is covered under this purpose. The number of participants and the rate of the fee are obtained annually from the National Agency for Higher Education. Sources: National Agency for Higher Education

**COICOP 111, Restaurants, cafés, fast food outlets.** The purpose includes all restaurant services, even if the restaurant is located within another activity, for example in a museum, at a swimming pool or on a train. "Take-away" sales of food and beverages from food premises and street stalls are also included. Household consumption has been benchmarked with the aid of consumer information in the SBS of 2004 in combination with the HBS and the trade's own records. The benchmarking also took account of explicit supplements under the desk. Supplements for military catering and for the consumption of foreign tourists in Sweden are also included. The HBS estimate for this purpose is clearly below the amount, which can be calculated with the aid of other material. Quarterly updates are collected from the turnover statistics and records from the trade.

Sources: turnover statistics, SBS, the VAT Register, the Swedish Hotel and Restaurant Employers' Association (Sveriges Hotell och Restaurangföretagare, SHR).

**COICOP 112, Hotel services and other overnight accommodation.** As for restaurant services, the consumption of overnight accommodation is underestimated in the HBS. The benchmark from 2004 was therefore set using a combination of different sources plus a supplement for the consumption of non-resident visitors in Sweden. The main source for annual updates is the SBS. Quarterly updates are collected from the turnover statistics, supplemented by Statistics Sweden's continuous accommodation statistics and camping statistics from the industry.

Sources: turnover statistics, SBS, the VAT Register, SCB accommodation statistics.

**COICOP 1211, Hair and beauty care.** In addition to hairdressing services, the purpose also includes expenditure for solarium facilities and skin care. The initial value for 2004 is based on consumer information in the SBS. The purpose is subsequently updated per quarter with the aid of turnover and VAT statistics.

Sources: SBS, turnover statistics, the VAT Register.

**COICOP 1212, Electrical appliances for personal use.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: SBS, turnover statistics, the VAT Register.

**COICOP 1213, Goods for personal use.** The purpose includes goods for personal hygiene and beauty care. Examples of articles included are soap, shampoo, lotions, sanitary towels, toilet paper, cotton-wool, make-up, perfumes, shaving requisites, brushes, combs, hairpins, scales, scissors etc.

The initial value for 2004 is based on the HBS. The value is updated with the aid of the trend in retail trade turnover at current prices per quarter.

Sources: SBS, turnover statistics, the VAT Register

**COICOP 1220, Prostitution.** Estimates for prostitution are compiled by the help of a special model. It is by and large built on the number of prostitutes according to special intermittent surveys and the amount of money needed to buy drugs during a year. A large number of prostitutes are drug addicts. The benchmark is from 2004 and intermittent updates may be possible when special investigations are made by the National Board of Health and Welfare. There is no relevant HBS estimate for this purpose.

Sources: Intermittent surveys published as Statens Officiella utredningar and material on the subject from The National Board of Health and Welfare, Research report from Malmö highschool.

**COICOP 1231, Jewellery and watches including repairs.** The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter.

Sources: SBS, turnover statistics, the VAT Register

**COICOP 1232, Other personal effects.** This purpose includes miscellaneous goods such as handbags and wallets of all kinds, smokers' requisites such as pipes, lighters and the like, baby accessories such as prams and car-seats, umbrellas, walking-sticks, sunglasses etc. The initial value for 2002 is based on the survey Retail trade sale 2002. The value is updated with the aid of trend figures from the turnover statistics at current prices per quarter. The HBS estimate and the Retail trade estimate was the same.

Sources: SBS, turnover statistics, the VAT Register.

**COICOP 12401, Child-care fees for child welfare.** The consumption consists of fees paid by parents for child welfare including family day nurseries (pre-school for children age 1-5 are excluded from year 2003, see COICOP 1011). The main source for the annual calculations is local government finance statistics. These specify charges collected by the municipality for activities such as child-care and elderly-care. For child-care provided in facilities other than those of the municipality, the following calculation model is used. Expenditure on the number of children placed in different forms of care is taken from the annual child-care surveys. The average cost per year per child is calculated with the aid of charges collected by the local authority child-care services and the number of children in local authority care. With the aid of the average cost per child, the total amount of charges for other child-care is calculated.

Sources: summaries of local government accounts, SCB annual child-care survey.

**COICOP 12402, Elder-care including mobility service.** The main part of the consumption consists of charges paid by elderly and disabled care recipients to the local authorities for different forms of care and for mobility service. The different forms of care consist of services in the person's own home, special accommodation in serviced houses and apartments and residence in group facilities. The sources for the annual calculations are the primary municipalities' finance statistics, in which the charges paid by care recipients are recorded. A smaller part is charges collected by private entrepreneurs, in this case the value is based on consumer information in the SBS.

In Stockholm County special mobility services are provided under county council auspices. The amount of the charge is collected directly from the Mobility services board (Färdtjänstnämnden) and is added to the other mobility service charges, which are obtained directly from the primary municipalities' finance statistics.

Sources: local government summary accounts, intermittent reports from the National Board of Health and Welfare on the monitoring of elder-care etc., annual statistical records, financial records of the Mobility services board and SBS.

**COICOP 12403, Compensation for a personal assistant under the Act concerning Support and Service for Persons with Certain Functional Impairments.** The purpose covers the compensation that disabled persons receiving care pay for the services of personal assistants. Decisions on entitlement to a personal assistant must first have been taken by the local authority social services. The Act providing for entitlement to a personal assistant came into force in 1993 and forms part of a major reorganisation of care services, for which recording in the national accounts first began in 1994. Previously this care had been provided entirely in closed facilities. The care recipient has the option of choosing for himself or herself whom he or she wishes to engage as a personal assistant. The assistants represent a number of different employer groups, namely: local authorities, users' cooperatives, other service organisations (SNI 853), own initiative (SNI 950000) and various employers (SNI 950000).

Data on compensation per hour and the number of hours for which compensation is paid for different employer groups are obtained monthly from the Swedish Financial Management Authority (Ekonomistyrningsverket, ESV). The material is based on compensation for assistance approved and paid.

Sources: Swedish Financial Management Authority (ESV), National Social security Board (RFV)

**COICOP 12404, Charges for individual welfare services.** The charges covered here relate, inter alia, to family guidance services. Data on the charges paid under this heading are obtained from the local government summary accounts. The HBS has no information on this type of charge

Sources: local government summary accounts.

**COICOP 125, Insurance services.** Insurance services are calculated annually in conjunction with the output calculations for insurance companies and consist of insurance services for life insurance and non-life insurance. The data are obtained from the Financial Supervisory Authority and are processed for the national accounts in such a way that definitions in line with the SNA are obtained. The consumption by households of life insurance services consists broadly speaking of the management costs incurred by the companies for the activity. The consumption by households of non-life insurance services is defined as premiums paid plus direct returns on actuarial reserves allocated to policyholders, less claims settled. The source of information used for the calculation of the output of other non-life insurance services does not contain information on the allocation of the output.

### *Insurance*

<i>class</i>	<i>Final consumption %</i>	
1	Health and accident insurance	100
2	Employers no-fault insurance	100
	Householder's and homeowner's	
3	insurance	40
	Business and homeowner's	
4	insurance	0
5	Motor vehicle insurance	70
6	Motor third party insurance	70
7	Marine insurance	20
8	Aviation insurance	0
9	Transport insurance	0
10	Credit insurance	0
11	Discharge insurance	100
12	Animal insurance	5

Insurance classes 2 and 11 are set to 100 percent final consumption and insurance class 4 is 100 percent intermediate consumption. Insurance class 1, contractual insurance is deducted and is a part of COICOP 1262. Health and accident insurance paid by employers outside of contractual agreements are estimated to be insignificant. Insurance classes 8, 9 and 10 are set to 100 percent intermediate consumption where the proportion of final consumption is believed to be nothing or negligible. Insurance classes 3, 7 and 12 use benchmark information from 1993. Insurance classes 5 and 6 were benchmarked in 2005 using information from the Swedish Insurance Federation (Trade association) and the Swedish Financial Supervisory Authority. The HBS estimate is not relevant since it is based on data on premiums paid.

Source: the Swedish Financial Supervisory Authority,

**COICOP 1261, FISIM.** The households' final consumption of FISIM comprises FISIM on loans and deposits for consumption and FISIM on loans for tenant owned flats and is calculated annually. Stocks of loans and deposits for consumption are obtained by subtracting the households total with stocks of loans and deposits for intermediate consumption (households as owners of dwellings and unincorporated enterprises) and tenant owned flats. The source of information for the stock of loans for tenant owned flats is the Riksbank's Financial Market Statistics on housing credit institution's lending by collateral. The calculation of FISIM is described in chapter nine "The exclusion of the effect of the allocation of FISIM on GNI". There is no relevant HBS estimate for this purpose.

Sources: the Swedish Financial Supervisory Authority and the Riksbank.

**COICOP 1262, Financial services.** The consumption by households of financial services consist partly of directly measurable services in the form of commissions, brokerage fees and charges paid for various financial services and partly of indirect charges on household fund savings. Commission income is recorded by banks, credit institutions and mutual funds. It is also recorded in SNI 67, for example, by the Swedish Securities Register Centre, the Stock Exchange and foreign exchange offices. Consumption is calculated as a proportion of production from a bank survey conducted in 1993. There is no relevant HBS estimate for this purpose.

Sources: statistics on financial sector results.

**COICOP 12701, Funeral services.** The level was benchmarked in 2004 with the aid of the SBS 2004. Reconciliation is carried out with the VAT Register. Updating is carried out at constant prices per quarter on the basis of information on the number persons deceased. Reflation to current prices is carried out with the CPI for funeral services. There is no relevant HBS estimate for this purpose.

Sources: Statistics Sweden, population statistics, data on the number of deceased, average funeral cost according to information from the trade, the VAT Register, SBS.

**COICOP 12702, Miscellaneous charges, including fees for passports and fishing permits and fees payable to the enforcement service.** The initial benchmark is from 1995. Annual data obtained from Financial Management Authority records on fees received are used for extrapolation.

Sources: ESV records

**COICOP 12703, Miscellaneous other charges.** Other services consist of expenditure for legal, fiscal and technical services. The purpose includes miscellaneous small charges such as for copying, consultation of astrologers and the like, newspaper advertisements and agents' fees in connection with the sale of tenant-ownership rights. The initial value for 2004 is based on SBS with a supplement for agents' fees collected in conjunction with the housing calculations. Updating is carried out at current prices per quarter with the aid of the turnover statistics and the VAT Register.

Sources: turnover statistics, the VAT Register, SBS

**COICOP 15, Consumption expenditure by Swedes abroad.** Consumption of households abroad covers the costs of Swedish households for temporary stays abroad. The item comprises the data collected in accordance with IMF recommendations and classified as travellers' foreign exchange and diplomatic representation in the Swedish balance of payments statistics. The term travellers' foreign exchange here refers to data on tourist expenditure etc. and banknote exchanges (irrespective of purpose) by the general public together with supplements from, inter alia, the currency notification statistics. Diplomatic representation is understood to cover the current expenditure of diplomatic missions and the salary expenses of Ministry of Foreign Affairs staff and the like.

Balance of trade data on travel currency comprise the bulk of what is treated in the national accounts as costs of residence abroad. The sources are information in the quarterly survey of external trade of services and information from credit card companies, whose reporting contains data on use by Swedes of cards abroad and use by foreigners of cards in Sweden.

The travellers' foreign exchange data are reduced by the share constituted by Swedish business travellers' subsistence expenses. The share has been calculated on the basis of the intermittent travellers' foreign exchange surveys conducted by the Swedish Central Bank. The latest one was conducted for the period March 1994 to February 1995 by a monthly interview procedure with 2000 Swedish households in each case. The purpose was, amongst other things, to measure the distribution of total travel between business journeys and leisure travel. The inquiry also sought to measure travel expenditure in different countries, in order to balance the regular travel currency statistics. Another aim was to measure how much foreign currency was brought back to Sweden at the end of a journey. According to the survey the share of total subsistence expenses abroad accounted for by business travellers was about 38 per cent. The data are obtained quarterly.

Sources: Statistics Sweden and Swedish Central Bank (Sveriges Riksbank).

**COICOP 16, Consumption expenditure of foreign visitors in Sweden.** Consumption in Sweden by non-residents covers the subsistence expenses of foreign visitors and the expenses of foreign embassies in Sweden. Here too the source is provided by information on travellers' foreign exchange and diplomatic expenses. The values are obtained on a quarterly basis.

Source: Statistics Sweden and Swedish Central Bank (Sveriges Riksbank).

There is no commodity breakdown for either expenditure abroad or for the expenditures of visitors in Sweden. The product balancing is solved through the fact that these two different purposes have their own product groups. COICOP 15 is product 99901 and COICOP 16 is product 99902. Through this solution we can do a product balancing without commodity breakdown.

## 5.8 NPISH final consumption expenditure

**Table 83** Process table of final consumption expenditure of NPISH, 2005, mSEK

	Basis for NA Figures		EXPENDITURE APPROACH					Other	Total
	Surveys &	Administrative	Combined	Extrapolation and Models					
	Censuses	Records	Data	Benchmark	CFM and	CFC(PIM) &	Other E&M		
				Extrapolation	ratios	Imputed			
				and models		dw ellings		Total	
								Extrap	
								+Models	
Final consump exp	4 413	22 606				1 395	17 223	18 618	45 637
		Adjustments					Final		
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing	estimate		
Final consump exp	45 637		597				46 234		

The category of non-profit institutions serving households (NPISH) consists of organisations in the household sector which are operated without any profit objective, such as trade unions, churches, political parties, sport associations and welfare organisations. Consumption in NPISHs forms part of household consumption expenditure, but is recorded separately and is not allocated to goods and services.

Consumption in NPISHs is measured, in accordance with the definitions in ESA 95, as the sum of costs for intermediate consumption, wages and salaries, employers' social contributions, employment tax and consumption of fixed assets. In addition the consumption value is reduced by subsidies received (other subsidies on products), by income from the sale of market products and by production for own final use.

Thus it is not the charges and contributions of households to NPISHs which are recorded but the resources which the NPISHs have consumed that represent household consumption. The calculation of wages and salaries, social contributions and employment taxes is performed by allocation to seven purposes in accordance with COICOP, while other items are calculated for the NPISHs on a total basis.



### *Sources*

The main source of information for the calculations is the wages and salaries data which all employers must submit to the tax authorities for every person employed. The data are comprehensive and comprise wages and salaries paid and pay-related benefits. This branch of statistics is described in section 4.7. Social contributions and other taxes on production, which are calculated as percentages of the total, are added to the total amount of wages and salaries. Intermediate consumption is calculated in constant prices with the ratio between intermediate consumption and value added in current prices in year t-1. Intermediate consumption in current prices is obtained by reflation with the CPI total.

Subsidies comprise subsidies to wages and salaries and are obtained from the calculations for central government subsidies. Sales are primarily generated for activities in the gambling market, e.g. lotto, V65, Bingo, etc (source Lotteriinspektionen (The Gaming Board)). For sports info is gathered from the umbrella organisation Sveriges riksidrottsförbund and from a horse riding organisation. For evening courses by help of material from Folkbildningsrådet. For LASS (care of disabled people) from ESV. The expenditure of households for these services thus also constitutes part of household consumption allocated to purposes. NPISHs also sell social services to the local authorities.

With effect from 1 January 2000 figures for the Swedish Church are also included in the NPISH group. Previously the Swedish Church was covered by local government records. For The Church of Sweden an annual comprehensive survey is made in which sales figures and information on intermediate consumption are available.

### **Calculation of consumption expenditure for non-profit institutions serving households, 2005, SEK m:**

+ Intermediate consumption	18 537
+ Wages and salaries	24 946
+ Social contributions	10 449
+ Other taxes on production	2 016
- Other subsidies on production	2 340
+ Consumption of fixed assets	1 395
= Output value	54 979
- Sales	8 737
- Production for own final use	32
= NPISH consumption expenditure	46 234

## **HOUSEHOLD CONSUMPTION EXPENDITURE, List of sources**

Household budget survey  
Calculation by the Swedish Board of Agriculture of total food consumption in the country  
Storhushållsguiden (Institutional household guide)  
Turnover statistics  
VAT records  
Structural Business Statistics  
Data from the Swedish Alcohol Retailing Monopoly (Systembolaget)  
Data from Swedish Match  
Population and housing census 1990, containing data on the housing stock in the form of the total number of apartments.  
Data per square metre are obtained from the housing and rental survey (Survey of rents for dwellings, HiB).  
Data on rental per square metre are obtained from the income and cost survey (Inkomst och kostnadsundersökningen, IKU).  
New production less stock losses (demolition etc.)  
Energy balance for Sweden, NA.  
Supplies of electricity to households and trade are used as an indicator for the quarterly calculation  
Monthly statistics on the supply of natural gas, quarterly indicator  
Household consumption of town and natural gas, annual data  
Deliveries of liquid fuel to properties, quarterly indicator  
National accounts petroleum balances, annual data  
Quantities of wood consumed in individual houses, annual data  
SCB electricity and district heating statistics  
Apoteket AB  
Federation of Swedish County Councils, subsidies  
Records of the Federation of Swedish County Councils and primary municipalities of revenue received in respect of patient charges  
Numbers of visits to private care providers recorded by the Federation of Swedish County Councils  
National Social Insurance Board  
Motor vehicle model, NA  
Registration statistics of the vehicle register  
Swedish Association of Moped and Motor Cycle Trade (McRF)  
Swedish Consumer Agency survey of car repairs  
Records of the insurance companies on numbers of policies and claims settled in respect of motor vehicle and traffic insurance in accordance with FM 12 SM,  
Financial Supervisory Authority  
Number of driving tests passed obtained from the National Road Administration  
Data from Svensk Bilprovning  
Statens Järnvägar; the Öresund Consortium  
Civil Aviation Administration, annual accounts of air transport companies  
Shipping company statistics  
Records of the Swedish Local Traffic Association (SLTF)  
Posten AB  
Telia AB and other telecommunications operators

Swedish consumer electronics association (Svenska hemelektronikförbundet), suppliers of mobile telecommunications equipment  
 International Federation of the Phonographic Industry (IFPI)  
 IT research, IDC  
 Husvagnsciceronen (Caravan guide), annual edition  
 Marine Industries Federation  
 Swedish Horse-Breeding Association  
 Swedish Sports Confederation  
 Swedish Council of musical and cultural schools (SmoK)  
 Adult education council (Folkbildningsrådet)  
 Swedish Broadcasting Corporation (Radiotjänst)  
 National Council for Cultural Affairs, Swedish Film Institute, Mediasverige  
 Svenska Spel (Swedish Games Corporation)  
 Swedish Publishers Association, AB Tidningsstatistik  
 Intermittent reports of the tourist industry, records of the travel business  
 National Agency for Higher Education  
 Swedish Hotel and Restaurant Employers' Association (Sveriges Hotell and Restaurangföretagare, SHR), Statistics Sweden's accommodation statistics, National association of camp-site operators (Sveriges Campingvärdars Riksförbund, SCR)  
 City of Stockholm, municipal management office  
 SCB child-care survey  
 Swedish Financial Management Authority (ESV)  
 Statistics on financial sector results  
 SCB, population statistics, data on the number of deaths  
 National Road Administration, annual accounts  
 Swedish Central Bank (Riksbanken)  
 Income statements for wages and salaries  
 Records of the Church of Sweden

## 5.9 Government final consumption expenditure

**Table 84** Process table of final consumption expenditure of Government, 2005, mSEK

	Basis for NA Figures		EXPENDITURE APPROACH							
	Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models					Other	Total
				Benchmark Extrapolation and models	CFM and ratios	CFC(PIM) & Imputed dwellings	Other E&M	Total Extrapolation +Models		
Final consump exp	473 325	163 345	0			51 220	37 788	89 008		725 678
		Adjustments						Final		
	Total	Data validation	Conceptual	Cut-off	Exhaust.	Balancing		estimate		
Final consump exp	725 678	-3674	693					722 697		

Information is gathered from the summary accounts of local government and the administrative records of central government. Models refer to consumption of fixed assets. Data validation refer to intermediate consumption and conceptual to software estimates.

## 5.9.0 General government – introduction

### 5.9.0.1 Scope and size

In the national accounts general government consists of three subsectors – central government, local government and the social security funds. The breakdown in terms of the relative scale of general government consumption expenditure including VAT in 2005 was as follows:

	Value	Share %
Central government	194 844	27.0
Social security sector	2 249	0.3
Local government	525 604	72.7
Total	722 697	

General government is one of the so-called institutional sectors. These sectors consist of institutional units (ESA 1995, 2.12). All institutional units are producers and produce goods and services. There are three main types of producers. One is that of market producers (ESA 1995, 3.24), which are characterised by the fact that they produce goods and services that are sold on a market, so-called market products. The second type produces mainly so-called other non-market products for collective and individual consumption. The latter type of institutional unit, other non-market producers (ESA 1995, 3.26), groups together units in the sector of general government and non-profit institutions serving households. The third group of producers consists of producers for own final use, whose output serves for their own final use internally (ESA 1995, 3.25).

The general government sector includes all institutional units, which are other non-market producers, or producers for own final use that are mainly financed and/or controlled by general government. There are units within general government, which are organised as companies limited by shares but are nevertheless classified as other non-market producers because they are mainly controlled and/or financed by general government. Similarly there may be units which are similar to companies but do not have the legal form of a company. These so-called quasi-corporations are also classified as market producers. They are characterised both by the fact that they keep a full set of accounts and by the fact they are managed as though they were companies. Thus, with certain exceptions, publicly owned corporations and quasi-corporations do not form part of general government.

An institutional unit may consist of several kind-of-activity units (KAU) (ESA 1995, 2.106-2.109). In general government there are KAUs, which are classified as market producers or producers for own final use. Consumption expenditure only arises in units, which are other non-market producers.

### 5.9.0.2 Definitions

Consumption expenditure of general government is matched by the output value of public bodies less sales by public bodies of goods and services, less output for own final use, which is defined as output used for gross capital formation in their own sector, plus so-called social benefits in kind, i.e. purchases by public bodies of goods and services which are produced by market producers and supplied to households – without any further handling in general government – as part of social transfers in kind. The output value of public services is calculated as the sum of their production costs which comprise, on the one hand, intermediate consumption of purchased goods and services valued at

purchasers' prices and, on the other hand, compensation of employees, consumption of fixed assets and other taxes on production less other subsidies.

### **5.9.0.3 Classification by purpose**

General government consumption expenditure is classified according to purpose. The classification by purpose follows COFOG. Public services may either concern society as a whole, i.e. they may constitute collective consumption expenditure, or consist of individually oriented services, and i.e. they may constitute so-called individual consumption expenditure. Classification in accordance with COFOG amongst other things offers the possibility of distinguishing between individual and collective services provided by general government. In the national accounts expenditure for individual consumption is treated as transfers in kind. By deducting it from total final consumption expenditure in general government, it is possible to obtain actual consumption of general government. By adding it to the final consumption expenditure of households, it is possible to obtain the actual consumption of households. Classification by purpose is undertaken for each component individually, intermediate consumption and sales being further divided into income and expenditure types. Production classified in accordance with COFOG is directly recoded to SNI industries for the industry-by-industry presentation of the production accounts.

## **5.9.1 Reference framework**

### *5.9.1.1 The central government sector*

#### *Definitions and scope*

Central government includes all administrative departments of central government and other central authorities and institutions whose powers range over the entire economic territory, apart from the administration of the social security sector. This demarcation coincides to a large extent with the legal entity of the State. Also included are non-profit institutions, which are controlled and largely financed by central government. The legal form of these institutions is that of representational associations, other foundations or funds, social security funds and public corporations and establishments along with a few public limited companies. The public service undertakings of central government are classified as market producers and are therefore included in the non-financial corporations sector.

The Swedish Central Bank (Riksbanken), the public service undertakings of central government and most limited companies of central government are assigned to the corporate sector. Certain units, for example the royal theatres and Chalmers Technical University, which are operated as public limited companies, form part of the central government sector because they cannot be viewed as market producers – in order to be so classified, their income from sales must cover more than 50 per cent of their production costs. In accordance with ESA95 and the Manual on government deficit and debt., Part I.V, Botniabanan AB is also included in the expenditure and income of central government, since the purpose of the company is to finance and construct infrastructure investment which, after completion and according to contract, will be routinely used and paid for by the State. The current list, which is continuously updated, of institutions forming part of central government is available from both the Swedish Financial

Management Authority (Ekonomistyrningsverket, ESV) and Statistics Sweden (Statistiska Centralbyrån, SCB).

The various departments and agencies answering to Parliament and the Government cannot be regarded as institutional units in their own right. Instead they are viewed as constituting kind-of-activity units, which are subordinate parts of the institutional unit. Each KAU is classified as a market producer, producer for own final use or other non-market producer. The Swedish Export Credits Guarantee Board (Exportkreditnämnden) has been classified as market producer and hence is not included in the calculations for central government consumption expenditure. The units for the production of buildings and structures of the National Road Administration and the National Rail Administration are classified as producers for own final use and are also not included. All remaining central government departments and institutions have been classified as other non-market producers and hence are included in the calculations for central government consumption expenditure.

### *Sources*

The calculations are based on the recording by the Swedish National Financial Management Authority (ESV) of the expenditure of departments and agencies of central government by type of expenditure, the so-called basis of central government net lending. The basis for these records is derived from the central government accounting system and therefore covers all the expenditure of these bodies, even that financed from sources outside the State budget. All expenditure is thus as consumption, investment or a transfer and is specified by type of expenditure and purpose.

The ESV statistics on central government are based on the government accounts (Riksredovisningen), the accounting system to which the departments and agencies of central government report expenditure and income. With effect from 1999 the real economic codes are integrated with the codes for end-of-year financial statements. They are referred to by the common designation “S-codes”, or State reporting codes.

The code designations for the real economic income/expenditure types in the ESV basic data are five-character expressions. The codes start with an S which is followed by four digits. For certain bodies for which special information needs arise there is a further two-digit breakdown. The S codes are grouped in the following code classes:

- \* S1 Assets
- \* S2 Capital and liabilities
- \* S3 Income of the activity
- \* S4 Costs of the activity (staff costs)
- \* S5 Costs of the activity (expenses for premises and other operating costs)
- \* S6 Disposal, writing off and depreciation of fixed assets
- \* S7 Collection of revenue and transfers
- \* S8 Results from shares in subsidiaries and participations and capital changes

These code classes consist of a large number of detailed codes in which various staff costs, various types of other activity costs and income for services and goods etc. are specified. ESV and Statistics Sweden co-operate and meet several times a year and the result is that each variable is classified according to the national account's needs and the relevant COFOG-codes in the dataset that ESV delivers. Different parts within the expenditure are handled in

different ways but each variable in the dataset at ESV correspond to one (or more) defined variable(s) in NA. It depends on what level of detail the calculations are made. For example, intermediate consumption is based on several parts that are combined to aggregated parts, while social benefits in kind is one single figure in the dataset from ESV in the same way as in the NA.

The ESV income calculation is used as a source for some detailed calculations. It contains results and forecasts for the revenue headings under which the income of the State budget is specified.

Records for non-profit institutions and other institutional units, which are classed as central government bodies but are not covered by the State budget are collected in separate sequence and are included, distributed in real economic terms, in the ESV's material.

### 5.9.1.2 The local government sector

#### *Definitions and scope*

In 2005 the local authorities comprised 290 civic primary municipalities (primärkommuner, pk), 18 county councils and 2 regions (landsting, lt) and 103 local federations (kommunalförbund, kfb).<sup>1</sup> The calculations of the local government sector also include the Swedish Association of Local Authorities (Svenska kommunförbundet, Skfb), the Federation of Swedish County Councils (Landstingsförbundet, Ltfb) and non-profit institutions (ideella organisationer, IO) belonging to the local government sector. The shares of the various units in local government consumption expenditure excluding VAT for 2005 are shown below:

Value, SEK m/ Share as %	Pk	Lt	Kfb,Skfb,Ltfb,IO	
525 604	337 291	179 316	8785	
100	64	34	2	

The primary municipalities in Sweden are responsible in law for:  
 Social services including elder-care, child-care and social assistance issues  
 The system of public education for children and young people  
 Planning and construction issues  
 Protection of health and the environment  
 Sanitation and waste disposal  
 Emergency services  
 Water and sewerage

The municipality of Gotland (Sweden's largest island) is in addition responsible for health and medical care. The local authorities may also conduct activities on a voluntary basis in the fields of leisure and culture, supplementary basic education for adults (KOMVUX), housing, energy and trade and industry. Output of cleansing and waste disposal, water and sewerage, housing and energy is performed by units classified as market producers. Hence they are not included in the calculations for the consumption expenditure of primary municipalities.

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<sup>1</sup> The Church of Sweden, previously included in the local government sector, became an independent non-profit organization on 1 January 2000.

In Sweden the 18 county councils and 2 regions plus the municipality of Gotland engage in “county council activity”. About 90 per cent of county council activity consists of health and medical care. Other tasks consist of the provision of public dental care, education and cultural activities and, together with the municipalities, responsibility for the counties’ public transport and tourism promotion activities. In the field of education, the responsibilities of the county councils have progressively diminished in recent years. The primary municipalities have been in charge of the health care programme of the upper secondary school since 1 July 1999. The State took over most of the responsibility for higher education in the nursing professions with effect from 1 January 1999. The majority of rural studies colleges remain in the charge of the county council/region, however.

The local federations, Swedish Association of Local Authorities, non-profit institutions belonging to the local government sector and the Federation of Swedish County Councils also belong to the local government sector.

### *Sources*

The main source for the calculation of the consumption expenditure of the *primary municipalities* is provided by the summary accounts which are compiled annually by Statistics Sweden. The data are collected using an electronic form. As well as the questionnaire itself, the electronic form also contains pre-printed data, scrutiny checks and key figures, which are calculated automatically. There is also feedback reporting to the municipality in order to safeguard the quality of the data collected. The form contains around 3500 variables.

The source for the calculation of the consumption expenditure of the *local federations* are the summary accounts compiled annually under Statistics Sweden. The data are collected using an electronic form and contains of 50 variables.

The main source for the calculation of the consumption expenditure of the *county councils* is provided by the county councils’ summary accounts, which include the closing financial statements. The data from the various county councils/regions are collected and compiled by their own representational body, the Federation of Swedish County Councils.

The statistics for the primary municipalities, local federations and county councils are comprehensive, i.e. all units are included. The summary accounts are published annually in September and refer to annual expenditure for the preceding year. In the summary accounts for the primary municipalities, local federations and county councils a breakdown is shown by both fields of activity and types of expenditure and income. Data per field of activity are used in the distribution by purposes in accordance with COFOG.

Other sources used in the calculations of local government consumption include the annual accounts of the Swedish Association of Local Authorities and the Federation of Swedish County Councils, statistics on dance and theatre from the National Council for Cultural Affairs, employment statistics from Statistics Sweden and material from the National Agency for Education and the National Board of Health and Welfare.



### *5.9.1.3 Social security sector*

#### *Definitions and scope*

The social security sector includes institutional units of general government whose main activity is to manage funded social security schemes. They were set up and are monitored by the State, through legislation or otherwise, with the aim of providing social security benefits to the entire community or to large sections of it. The institutions must be independent with respect to the State, which is guaranteed by the fact that the benefits are financed by way of funds.

Social security schemes must meet two criteria:

It is compulsory by law and statutory provision for certain groups in the population to participate or to pay contributions.

General government is responsible for the management of the institution as regards determining or approving contributions and benefits independently of its role as a supervisory body or employer.

The social security sector comprises the The National Supplementary Pensions Scheme (ATP).

The institutions that manage the various social security schemes are the National Pension Funds (allmänna pensionsfonderna, AP-fonderna). Public consumption in the social security sector is made up of the administrative costs of the various insurance schemes which, according to the national accounts, are assigned to the social security sector: The National Supplementary Pensions Scheme (allmän tilläggspension, ATP). The administration costs consist of intermediate consumption of goods and services, compensation of employees, other taxes on production and consumption of fixed assets.

#### *Sources*

The ATP is administered by the management boards of the Swedish National Pension Fund. Sources for the consumption expenditure are the annual accounts of the national pension funds and a survey conducted by the National Social Insurance Board on behalf of the Swedish Financial Management Authority (ESV) and made available to Statistics Sweden.

### **5.9.2 Valuation**

Consumption expenditure is made up of the output value of the activity units of general government, which are classified as other non-market producers, minus their sales income plus their purchases from market producers of goods and services, which are supplied to households directly without further processing as social transfers in kind.

- + Military equipment
- + Intermediate consumption including deductible value-added tax
- + Wages and salaries
- + Social contributions
- + Other taxes on production
- Other subsidies on production
- + Consumption of fixed assets
- = Output value
- Sales of goods and services
- Production for own final use

- + Social benefits in kind (market-produced goods supplied directly to households)
- = Consumption expenditure of general government

Treatment of VAT in the government sector. The Swedish National Financial Management Authority (ESV) provides NA with information from the Swedish National Tax Agency on VAT repayments to government units. These amounts correspond to the non-deductible VAT for the government sector. Accordingly, the total amounts of non-deductible VAT are distributed on intermediate consumption, gross fixed capital formation and social transfers in kind. This is done in the following way:

For each unit of the General government (i.e. Central government, Social security funds, Municipalities and County councils), intermediate consumption, gross fixed capital formation and social transfers in kind is compiled divided up in products (CPA) and functions (COFOG) excluding VAT.

To every product, a theoretical tax rate is applied, based on Swedish tax legislation. The different VAT rates in Sweden are 25%, 12% and 6%, depending on which product. Also, according to this legislation, certain products are duty-free.

Certain functions of government, having a good deal of activities liable to pay taxes, are adjusted for this. For central government this information comes from ESV. For the municipalities and county councils information is available in the annual accounts for these units. Hence, we have a theoretical tax amount for the General government.

The theoretical tax amount for each unit of the General government is then adjusted in accordance with the real amounts from the Swedish National Tax Agency. Hence, in the Swedish NA, the total amounts of VAT repayments to government according to the Swedish National Tax Agency are available, divided by unit, transaction, product and function.

### **5.9.3 Transition from private accounting concepts to ESA95 national accounts concepts**

See adjustments for the various calculation groups (types of expenditure).

### **5.9.4 Roles of direct and indirect estimation methods**

Direct estimation methods are applied in the calculations for general government.

### **5.9.5 Roles of benchmarks and extrapolation**

The calculations are based on annual data at current prices, hence extrapolation is not used.

### **5.9.6 Exhaustiveness**

The basic material is comprehensive since data are collected for all activities. A plausibility check of the material is always carried out when it is received by Statistics Sweden. Comparisons in the form of time series are also used in order to detect any major divergence between years. The material is also returned to the data providers, inter alia in the form of key figures, which facilitate comparisons between different local authorities.

The suppliers are then able to correct their data if they consider that there has been an error.

### **5.9.7 Description of the calculation methods for the consumption calculations**

The calculation of total consumption expenditure is broken down for the components intermediate consumption, wages and salaries, social contributions, other taxes on production, other subsidies, consumption of fixed assets, sales, other assets produced for own account and social benefits in kind. Data at current prices are obtained from the relevant source.

#### *5.9.7.1 Intermediate consumption*

Intermediate consumption covers goods and services, which are used in the production process. Examples are food, paper, telephone charges, carriage, rentals and repair costs. Various benefits such as tax-free subsistence allowances, car allowances and other tax-free cost offsets and other staff costs are assigned to intermediate consumption.

##### **5.9.7.1.1 Intermediate consumption of central government**

The data are obtained from the Financial Management Authority's total activity. Intermediate consumption arising in the production of buildings and structures by the National Road Administration and the National Rail Administration and the intermediate consumption of the Swedish Export Credits Guarantee Board and the public law service offices are included up to and including 1999 in the total activity compilations but are recorded separately and are excluded in the NA calculations. The intermediate consumption calculations are broken down by the following cost types.

- \* Durable goods of the Armed Forces
- \* Rental expenditure
- \* Purchased repairs to buildings and structures
- \* Other intermediate consumption.

*Durable goods of the Armed Forces*, i.e. the purchase of durable goods (those which are used for more than one year) and the construction of fortifications by the Armed Forces are defined as intermediate consumption in the national accounts, not as investment. The data can be obtained directly from total activity subdivided into machinery and buildings.

Gross fixed capital formation consists of tangible or intangible assets acquired as a result of production processes and used for more than one year repeatedly or continuously in production processes. *Military armaments*, such as rockets and missiles with peripheral equipment, are in reality used in combat and in order to destroy, not to produce. They cannot be treated as an input in an economic production process and hence also not as a stock of inputs. Military weapons of destruction with a durability of more than one year and the equipment required to use them are therefore recorded in the national accounts as 'durable goods of the Armed Forces' and are included as consumption of central government. However, the provision of defence services may be regarded as a form of output which benefits people and for which they are prepared to pay, either individually or collectively. Just as with any other productive activity, it requires repeated or continued use of goods with durability greater than one year. It is possible to single out those, which are used broadly in the same way as in any other production. Utilisation is the same, whether it is military personnel or others who use them. Hence buildings and structures

for personnel employed in military functions, hospitals with associated equipment, schools, roads, bridges, airfields, docks etc. for military purposes are treated as *gross fixed capital formation*. In addition, machinery and equipment of the same type as the those used by civilian producers for non-military purposes are treated as gross fixed capital formation; for example, vehicles, boats and aircraft which are used for the transport of persons or goods; computers and office machinery and equipment; etc.

The Armed Forces' *purchases of machinery and installations without alternative civilian use* are recorded as intermediate consumption and therefore form part of the consumption expenditure of general government.

*Rental expenditure* consists of external rentals (rental paid to any person other than a government authority) and internal rentals (rental paid to another government authority). Amounts for both internal and external rentals are recorded in total activity.

*Building repairs*. The item consists of purchased repairs and is derived from total activity.

*Other intermediate consumption*. Internal central government items, i.e. purchases and sales between departments and agencies of central government, are included in both intermediate consumption and sales. Consumption in accordance with total activity is reduced in the national accounts by the motor vehicle tax arising. Motor vehicle tax is classified as other tax on production in the NA system. In the national accounts a calculation is performed to determine the scale of software purchases by the various sectors. The amount for central government is entered as investment and intermediate consumption is reduced by a corresponding amount, since it is not recorded separately in total activity but is entered as a cost. According to the ESA, intermediate consumption should only be recorded in respect of the share of insurance premiums relating to administration. In the national accounts the size of this share is calculated and the remaining amount is entered as transfer expenditure.

#### **5.9.7.1.2 Intermediate consumption of the primary municipalities**

A central activity unit in the municipality often handles both the management of the municipality's own premises and negotiations and contracts with external real estate managers. The unit is recorded under general administration. In the summary accounts (räkenskapssammandraget, RS), an internal rent is charged to other activities and an internal income item is entered for public administration. This is done in order to show a correct picture of the expenditure of the various activities. Internal rentals for premises are assigned to intermediate consumption and sales with the same value. This is the case for both county councils and primary municipalities. Apart from premises, this can also arise for common activities such as central telephone exchanges etc.

The summary accounts (RS) are used as a source for most data in the calculation of the intermediate consumption of the primary municipalities. It starts with purchases of external goods, services and rentals specified by area of activity in the RS operating accounts. Items of expenditure which in accordance with the ESA are not classified as intermediate consumption or which involve the intermediate consumption of producers for their own final use are deducted from purchases. These are:

*Intermediate consumption for construction for own account*, which appears in the

operating accounts. The cost of this intermediate consumption, as also other costs for construction for own account, arises in units, which are producers for their own final use. These units are included in industry as construction industry units.

*Machinery with an economic life of 1-2 years.* Purchases of machinery and equipment are recorded in both operating and investment accounts. Machinery with an economic life of at least three years is recorded in the latter. Based on a survey on intermediate consumption (Förbrukningenkäten) eighty per cent of the machinery in the operating accounts is classified as machinery with an economic life of 1-2 years.

*Financial leasing charges.* The capital item leased is recorded in accordance with the ESA as gross fixed capital formation in the leasing activity. See section 5.10.22. The leasing charges are consequently entered in the national accounts with a breakdown as to interest and amortisation costs.

*Levies and restitutions for regional bodies* are classified as transfers. All primary municipalities pay a membership fee to the Swedish Association of Local Authorities. In addition several local authorities finance local federations by means of levies.

*Purchases and sales between primary municipalities.* The primary municipalities purchase and sell services from and to one another. As all primary municipalities are assigned to the same sector, the amounts are recorded as net items. Purchases from other municipalities and local federations are recorded together in one column of the specification in the summary accounts. Sales incomes from municipalities are recorded in the accounts of the local federations. Purchases from other municipalities are thus obtained as a residual amount.

*Motor vehicle tax.* Local authorities pay tax on their vehicles. The tax is classified as other taxes on production.

*Social benefits in kind.* Social benefits in kind is generated by a market producer in the form of a good or service, which is supplied directly to households. The local authority pays for the good or service but is not involved in any further processing of it. The item is described in more detail in the section on social benefits in kind, section 5.9.7.8.

*Purchased software.* Purchased software is counted as investment and this is described in more detail in section 5.11.2.

*Purchases from NPISHs.* The primary municipalities pay for child-care in parents' cooperatives (classified as non-profit institutions serving households, NPISH). These purchases from NPISHs are classified as transfers. The way the item is calculated is described in more detail in the section on social benefits in kind.

*Insurance charges.* Premiums paid by the local authorities to insurance companies are reclassified partly as transfers and partly as purchased services. A survey stated that 74 per cent of the total insurance amount should be treated as a transfer which means that the intermediate consumption is reduced with the corresponding amount. The insurance charge is specified in the external expenditure section of the summary accounts.

*Purchases from private individuals.* The purchases a local authority makes from private individuals are treated by definition as transfers. They may involve restitution for the care of family members in the home. Purchases from individuals are broken down by activity in the summary accounts. From 1998 onwards, purchases from individuals are recorded in a separate column in this section. For previous years the expenditure is grouped together with purchases from central government and thus has to be subdivided.

*Goods in commercial activity.* Goods, which the commercial activity area purchases for resale, are deducted both from intermediate consumption and the output value.

The above calculation is carried out for each individual activity area, about 100 areas which all have bridges to COFOG, and results in a figure for intermediate consumption per purpose at current prices for other non-market output and intermediate consumption per industry for market output.

#### **5.9.7.1.3 Intermediate consumption of the county councils**

The summary accounts (RS) are used as a source for most data in the calculation of the intermediate consumption of county councils. The starting point is purchases of external goods, services and rentals specified by activity area in the RS operating accounts. Expenditure items, which are not classified as intermediate consumption according to the ESA, are deducted from purchases. They are:

*Social benefits in kind.* Social benefits in kind is generated by a market producer in the form of a good or service, which is supplied directly to households. The local authority pays for the good or service but is not involved in any further processing of it. The item is described in more detail in the section on social benefits in kind, section 5.9.7.8.

*Purchased software.* Purchased software is counted as investment and this is described in more detail in section 5.10.

In the final calculations intermediate consumption is calculated by splitting it up into the following subgroups:

- Medicines
- External accommodation rentals
- Internal accommodation rentals
- Building repairs
- FISIM
- Administrative costs
- Other goods

#### **5.9.7.1.4 Intermediate consumption of other types of local authority**

Data on intermediate consumption for other types of local authority are obtained from the summary accounts (RS) of local federations, the annual accounts of the Swedish Association of Local Authorities and Federation of Swedish County Councils, the theatre and dance statistics issued by the National Council for Cultural Affairs and statistics on the contributions paid to non-profit institutions belonging to local authorities.

#### **5.9.7.2 Wage and salary costs**

Compensation of employees is collected from the same comprehensive source as other data for government compilations.

Compensation of employees is defined as the total remuneration, in cash or in kind, which is paid by an employer to an employee for work done by the latter. This definition coincides with the definition in the sources, which are used for the calculation of the different sectors, and wage and salary totals broken down by different activity areas are obtained directly from the relevant source. The totals for wages and salaries are shown broken down by non-market output and market output. In Sweden the possibility exists for an employer to hire out computers to his staff in return for a deduction from their pay, which is excluded from assessment for income tax and employer's social contributions. The hire scheme is applied in general government. The wage deductions are not shown in the wage totals stated, which are therefore supplemented by the amount in question. A corresponding adjustment is also made to sales income.

As was the case for intermediate consumption, wage costs in respect of the production of buildings and structures by the National Road Administration, the National Rail Administration and those of the Swedish Export Credits Guarantee Board and the public law service offices are included up to the end of 1999 in the total activity compilations. However, they are recorded separately and are excluded in the NA calculations. Expenditure for military catering in accordance with a separate calculation carried out in the national accounts is added to the wages and salaries total for central government in accordance with total activity. Corresponding amounts are shown as part of sales income.

#### *5.9.7.3 Social contributions and other taxes on production*

Employers' social contributions are charges that the employer pays in the form of a percentage deducted by law or under a contractual requirement from an employee's pay. In the national accounts employers' charges are grouped into two categories; one is termed social contributions and covers that part which benefits the employee in some way under various social security schemes, for example health insurance, unemployment insurance or future pension provision. The other category is recorded as other taxes on production and consists of social contributions, which do not benefit the employee directly but are in reality a tax on labour, for example the general employment tax (allmänna löneavgiften).

The charges are calculated as a percentage of wages. The percentage rates are obtained from the employers' organisations.

#### *5.9.7.4 Other taxes on production*

Other taxes on production, apart from motor vehicle tax, fall into two categories. One comprises general employment taxes and is calculated at current prices with the aid of the percentages of the wage total applicable. The other category covers special employment taxes, which the employer pays on the earnings of those employees aged 65 and over and on pension costs. It is calculated at current prices with the aid of a fixed percentage of pensions paid. Data on pensions are available in the sources.

Compulsory military service pay is excluded from the wages and salaries total in this percentages calculation, since it does not generate social contributions.

The percentages applicable to the primary municipalities sector in 2005, which are used in the calculation of social contributions and other taxes on production, are given below. The percentages may vary somewhat owing to the fact that the different sectors have separate agreements.

**Table 85 The percentages applicable to the primary municipalities sector in 2005**

	<i>Primary municipali ties</i>	<i>County - council s</i>
<b>Social contributions</b>		
Health insurance contribution	10.15	10.15
National basic pension contribution	10.21	10.21
Survivors' pension contribution	1.7	1.7
Industrial injury contribution	0.68	0.68
Labour market contribution	4.45	4.45
Parent insurance contribution	2.2	2.2
Other insurance contribution	8.19	9.84
Total	37.58	39.23
<b>Other taxes on production</b>		
Payroll taxes	1.29	1.69
General employment tax	3.07	3.07
Total	4.36	4.76
Employment tax	24.26	24.26

***Central Government***

	<b>Percent</b>
<b>Social contributions</b>	
Retirement pension contribution	10.21
Surviving pension contribution	1.70
Health insurance contribution	10.15
Industrial injury contribution	0.68
Parental insurance contribution	2.20
Labour market contribution	4.45
Total	29.39
<b>Other taxes on production</b>	
General employment tax	3.07
Supplementary pension contribution	1.16
Total	4.23
Special employment tax	24.26

***5.9.7.5 Other subsidies on production***

Subsidies of central government on production are recorded in the ESV material. They refer to the National Labour Market Board, for example work concerning European social fund, and also different County Administrative Boards, for example regarding European regional development fund. Subsidies of local government on production are obtained from central government and consist of the wage support contributions the local authorities receive from the National Labour Market Board (Arbetsmarknadsstyrelsen, AMS). The sources for these data are the central government accounts.



#### *5.9.7.6 Consumption of fixed assets*

Consumption of fixed assets consists of the reduction in value, which a fixed asset undergoes because its economic life is limited. For general government calculations the same method is used as the in the rest of the NA system. The method is based on the fact that capital stocks are created with the aid of investment series in accordance with the so-called perpetual inventory (PI) method. The capital stocks are subsequently written down in accordance with economic life assumptions and the consumption of fixed assets is obtained. See section 4.12.

#### *5.9.7.7 Sales*

##### **5.9.7.7.1 Central government**

Sales denote the sale by departments and agencies of government of goods and services, including rental income. Sales income is a deduction item in the calculation of consumption. See section 5.9.2. Sales income must include both charges payable under public law and charges payable in the execution of orders and contracts, as well as marketing activity. The boundary between taxes and purchases of services from general government, in respect of payments by both enterprises and private individuals, is defined as follows:

If permits/licences are issued automatically in return for the payment of a fixed amount, the payments are treated as taxes. If on the other hand general government uses licensing effectively as a form of control (for example, as a means of controlling the competence or qualifications of the persons or enterprises concerned), the payment for the licence is treated as a purchase from general government, unless the payment is out of all proportion to the cost of providing the service.

As in the case of intermediate consumption and compensation of employees, sales arising in the production of buildings and structures of the National Road Administration and the National Rail Administration and in the Swedish Export Credits Guarantee Board and the public law service offices are included up to and including 1999 in the ESV material. However, they are recorded separately and excluded in the national accounts calculations.

In the calculation of the external sales of central government, the amount recorded in the ESV material is adjusted for the costs of both the service export of peacekeeping troop deployments to international organisations and military catering for national service personnel. The expenditure for military catering is thus also included, except in the form of a production cost, in the central government wage total for military service personnel and as a corresponding sales income item. Data on sales by the insurance funds of administrative services to the social security sector were obtained up to the end of 1999 from the National Social Insurance Board, but are subsequently included in the ESV material. In the national accounts a calculation is used to determine the scale of software purchases by the different sectors and of their production of software for own account. As was noted in previous sections, these amounts are entered as investment. Software produced for own account is treated by way of simplification as sales income.

The amount of internal sales income, broken down by rentals and other goods and services, which are matched by commensurate amounts on the expenditure side partly in the form of other current intermediate consumption and partly in the form of internal rental costs, is recorded in and obtained from total activity.

#### **5.9.7.7.2 Primary municipalities**

Internal accommodation rentals, and for primary municipalities also joint activities, are included in sales and intermediate consumption in respect of the same amounts (see section 5.9.7.2 on intermediate consumption).

In the primary municipality calculations data are obtained from the summary accounts, columns for tariffs and charges, external rentals for housing and premises and other external income. The following items are deducted from the summary accounts records:

*Sales to other municipalities* are calculated from the specification in the summary accounts. The primary municipalities sell and purchase activity to and from each other, which is recorded net. See further under intermediate consumption: purchases and sales between primary municipalities.

*Operating grants from central government and the National Labour Market Board* to the primary municipalities are counted as transfers.

*Grants from the EU* to the primary municipalities is also counted as transfers.

The calculation of *software produced for own account* is described in detail in the section on acquisition minus disposal of intangible fixed assets (5.11.2). Software produced for own account is added in the calculation and is also included as a use in the investment calculations for primary municipalities.

Mobility schemes, which have been developed in Sweden since the 1960s, are intended to supplement public transport provision and to extend travel facilities to elderly and disabled persons who experience substantial difficulty in moving from place to place unaided. The cost of transportation service for elderly and disabled is split between households and municipalities/county councils. Elderly and disabled pay fees (a small part of the total costs) when they use these mobility schemes. The fees they pay are counted as household consumption expenditure and the same sum is treated as sales for municipalities. The costs that the fees from households do not cover are counted as consumption expenditure in the municipalities /county councils.

#### **5.9.7.7.3 County councils**

For the county council calculations information is available from the summary accounts of the county councils. The calculations for the county councils are subdivided according to the following income types:

Goods

Services excluding rentals and charges

External premises rentals

Internal premises rentals

Patient charges for public dental treatment

Patient charges for out-patient medical treatment

Patient charges for in-patient medical treatment

Software produced for own account

#### *Patient charges for public dental treatment*

For the annual calculations, data are available in the summary accounts on patient charges received by the county council.

#### *Patient charges for out-patient medical treatment*

These include charges in respect of attendance both for primary care and for care provided under regional and county schemes and for other health-care services, such as physiotherapy, district nurses, auxiliary nurses, psychiatric teams, occupational therapy, midwives etc. (maternity and infant welfare, which are free of charge, are of course not included in attendance charges).

For the annual calculation, data on patient charges are obtained from the summary accounts of the county council. The distribution between primary municipality health care and county and regional health care is based on the attendance statistics collected by the Federation of Swedish County Councils.

#### *5.9.7.8. Social benefits in kind*

Social benefits in kind arise at central government, primary municipality and county council level. Social benefits in kind arise in the activities social welfare, education and health and medical care and is described below.

Central government purchases for social benefits in kind (market-produced goods supplied directly to households) to the end of 1997 covered medical benefits in the form of medicinal products specified both as certain consumption articles and as foods. From 1997 onwards part of central government medical benefits was contained within the general central government grant to the municipalities and county councils; from 1998 they are contained in full within the central government grant, hence the benefits are administered under the authority of the municipalities and county councils.

Social benefits in kind of central government also include public legal aid, vocational training, dental care and rehabilitation services.

Data on the scale of the medical benefits were obtained from the National Social Insurance Board. Other social benefits in kind is shown in total activity.

The summary accounts of the primary municipalities record purchases of activity and purchased contract services by contracting party and area of activity. Purchases of local authorities from enterprises and from associations and foundations are classified as social benefits in kind.

For *health and medical care* summations of the activity purchases of Gotland are applied. As of 1998, the only authority remaining untied with a county council is Gotland.

*Child welfare* purchases from enterprises and from associations and foundations are classified both as social benefits in kind and as grants. Parents' cooperatives, which count as enterprises, associations and foundations are assigned to non-profit institutions serving households (NPISH); purchases from these are therefore classified as grants. Social benefits in kind is obtained residually after the grant element has been deducted from purchased activity. This is calculated with the aid of the National Agency for Education, which has statistics on the number of children receiving welfare in parents' cooperatives

and the total number attending privately operated crèches or recreation centres. Older children attending recreation centres out of school hours are assigned half weighting in relation to the others. The grant element is obtained as the proportion of children in parents' cooperatives in relation to children receiving welfare in privately operated facilities times the amount of purchases from enterprises, associations and foundations.

Social benefits in kind of *welfare for the elderly and disabled* consists of the purchase of the relevant activities from enterprises, associations and foundations. Part of social benefits in kind consists of restitutions in accordance with the Act concerning Support and Service for Persons with Certain Functional Impairments (LSS), which came into force in 1994 and is a statute of rights intended to guarantee good quality of life for persons with extensive and long-term disabilities. After assessment of needs, the disabled person may amongst other things be granted an allowance for personal assistance and accompaniment service measured in number of hours. The primary municipalities always pay for the first 20 hours. Hours in addition are paid for by central government. The portion of the assistance allowance funding provided by central government, which the municipalities use to purchase external services is counted as social benefits in kind. Data are obtained from the summary accounts from 1995 onwards. For 1994 the data are calculated on the basis of the same shares as in 1995 of total central-local government funding for these allowances.

Social benefits in kind of *education* is calculated from the statistics of the National Agency for Education on the number of pupils in primary and secondary education in the publication *Skolan, jämförelsetal för huvudmän* (The school, comparison figures for education officers). The number of pupils and the amount paid per pupil are available. All education in Sweden is financed by general taxes and this is how private entrepreneurs within the school area are reimbursement per child.

*Mobility services / national mobility services* are also classified as social benefits in kind. The purchase by local authorities of mobility journeys is recorded in external services in the operating accounts of the activity area mobility service. The charges paid by the passenger himself/herself are deducted from the amount. The remainder constitutes what the primary municipalities pay for the service.

Social benefits in kind for the county councils consists of care agreements with private care providers and net purchases by the county councils of mobility services. The data are recorded in the summary accounts. From 1997 onwards the provision of incontinence protection is also included in social benefits in kind and, from 1998, also costs of medicines covered by medical benefits for out-patient treatment.

## 5.10 Acquisitions less disposals of tangible fixed assets

**Table 86** Process table of gross fixed capital formation, 2005, mSEK

Table 661 Process table of gross fixed capital formation, 2005, NAFTA												
		Basis for NA Figures									Other	Total
		Surveys & Censuses	Administrative Records	Combined Data	Extrapolation and Models							
					Benchmark extrapolations	CFM and ratios	CFC(PIM) & Imputed Dw.	Other E&M	Total Extrapol+Models			
	Gross fixed capital formation	112053	1776	179143	0	0	0	180919	180919	1994	475885	
PI6	Products of agriculture, forestry, fishery and aquaculture								0	1591	1591	
	Metal products and machinery	15136	415	123329				18177	18177	31	157088	
	Transport equipment	4316	0	0	0	0	0	40562	40562	0	44878	
	Construction of housing	29225	0	0	0	0	0	47732	47732	0	76957	
	Other constructions	48632	976	55814	0	0	0	9497	9497	372	115291	
	Other products	14744	385	0	0	0	0	64951	64951	0	80080	

Surveys and censuses refer to government sources, foreign trade survey, financial survey and housing construction and conversion survey

Administrative records refer to Annual Accounts for the Churches of Sweden and The Swedish Geological Investigations

Combined data refer to SBS

Extrapolation and models refer to the special calculations of dwellings, transport equipment, software, entertainment, literary and artistic originals and costs of ownership transfer.

### 5.10.0 Definition of gross fixed Capital formation

GFCF is measured as acquisitions, less disposals of produced assets and major improvement of produced assets and sometimes non produced assets during an accounting period. GFCF products should be used in a production process repeatedly or continuously for more than one year.

Principally four different compilation models are used depending on what information is available in the SBS. Companies with both opening and closing balance are the most common ones. Second are new companies with only a closing balance. The third case is companies with only an opening balance which is the most difficult one because companies can be in bankruptcy but there can also be other explanations that cause a lack of closing balance. It is very often that assets must be imputed after we have found out where they are. The last case is companies with no opening and closing balance. In Sweden they are very few.

#### 5.10.0.1 Reference framework

The SBS is the main source for annual investment benchmarks for market production. Central government investments are collected from the Financial Management Authority and local government from the Summary Accounts. Covered is the investment of new structures in progress, machinery and equipment, buildings and structures.

The total gross fixed capital formation is calculated as the difference between the closing and opening balance for buildings and machinery and structures adjusted with the difference between remaining value and sales value as mirrored in the reported capital gains/losses. This latter item is the difference between the book-keeping value (FAR) and the value according to the National Accounts (ESA). The sum of this calculation will be the net investment for the period.

From the SBS is sorted out which companies have made major investments during the year. For the detailed information on objects firstly the ordinary quarterly investment survey is used and for the rest of the companies, which have not received and answered the quarterly survey, a special complimentary annual survey is sent out. The investment concept used is defined as the acquisition of capital assets with a calculated economic life of at least one year together with reconstruction and improvements, which significantly increase capacity, standard or economic life. The survey covers also intangible investment.

These surveys give information on sales amounts broken down according to object. The material is also broken down on new work in progress, by new investment, purchase of existing items and production for own account.

For machinery and transport equipment new acquisition during the year and new installation of machinery in progress less sales of machinery and equipment is calculated.

For buildings and structures the calculation covers new construction of buildings and structures in progress less purchases of existing buildings and structure.

#### *5.10.0.2 Valuation*

Gross fixed capital formation is valued at purchasers' prices including delivery and installation costs. In those cases for which the market price is not available, for example where capital units produced for own account are concerned, it has proved necessary to accept the production cost without addition of the profit element, which should have arisen on a sale. Alternatively capital items produced for own account can be valued at the basic price, which applies to the type of capital item involved in the investment, assuming such a basic price is available. The valuation also includes all other costs associated with the acquisition, for example customs duties and other indirect taxes, transport costs, financing of architectural and technical services. Non-deductible value-added tax is included. VAT on the investment of departments and agencies of government are also included according to the Commission Decision 1999/622 EEC of 8 September 1999. This treatment is not in accordance with Swedish tax legislation.

As regards buildings and structures whose completion time normally extends over several periods, the total investment value is apportioned in such a way that the investment amount recorded for each period in principle corresponds to the part completed during that period. Often, however, by way of a satisfactory approximation, it is part payments during the period, which are recorded.

Gross fixed capital formation is recorded at the time the ownership of the capital item transfers from the vendor to the user. In the case of financial leasing, the transaction is recorded when the user – the lessee – takes the item into his possession, despite the fact that it is still owned by the lesser during the entire leasing period. Investment in capital items produced for own account is recorded at the time the items are produced.

In the national accounts only changes in inventory volumes are included in inventory investment. Changes in inventory volumes can then be valued at current or constant prices. If the change in inventories is calculated as the difference between incoming and outgoing inventories, which is the most common instance, the inventories must be valued

in both instances at the same price level, the average purchase and sale price, respectively, for the period.

#### *5.10.0.3 Transition from private accounting concepts to ESA95 national accounts concepts*

Swedish legislation allows the direct depreciation of so-called 1-2 year investment, i.e. capital items of limited value with an economic life of less than 3 years. SNA 93 and ESA 95, on the other hand, treat this as gross fixed capital formation. The areas affected by the difference between the accounting legislation and the national accounts are, on one hand, software investment and, on the other hand, investment in machinery and equipment (specifically account 5410, short-term inventories, in the basic account plan).

The following reallocations are made. An amount corresponding to the value of software investment (section 5.11.2) is deducted from intermediate consumption. In addition the national accounts can reallocate certain intermediate consumption to gross fixed capital formation with the aid of a special question for compilation of this item now included in the SBS. A reallocation of intermediate consumption to investments is therefore possible already in the processing of the SBS data by the producing unit. Apart from this, for machinery investment the definitions in the SBS are consistent with those of the national accounts.

For construction investment, estimates are required, which only contain investment in new assets. This information is essential because of the method used (net recording) for the calculation of output in the construction industry. The figures cover all gross fixed capital formation for the year on new construction of buildings, structures in progress less purchases of existing buildings and structures. It is possible to separate new investments from sales and purchases of existing items.

#### *5.10.0.4 Roles of direct and indirect estimation methods*

The main source is the SBS but it is supplemented and cross-checked with results from quarterly and annual surveys and models built on administrative material to get the breakdown by capital types of the total figure of investments.

The following models with different supporting material are used in order to guarantee complete coverage

- \* Transport equipment models based on administrative source material
- \* The leasing model based on both administrative and survey material
- \* The model for purchased software based partly on SBS material, but also on goods flow analysis
- \* The model for own produced software based on administrative material on occupational codes and wages and salaries
- \* The model for housing construction is based on the number of apartments/houses commenced, construction expenditure and normal construction and completion time.
- \* Some industry-specific and minor models with varying source material are also available.

#### *5.10.0.5 Roles of benchmarks and extrapolation in the investment calculations for buildings, machinery and means of transport*

Annual benchmarks are compiled for investment items. Only a few very small items, drainage within agriculture and white goods, are extrapolated.

#### *5.10.0.6 Exhaustiveness*

A special group of representatives of bodies working on business statistics, investment surveys, the national accounts and statistical methods continuously assess the results and the construction of surveys in relation to one another. The comprehensive SBS is the main source. The investment surveys and other sources are used for checking the adequacy of the estimates. Problems on over- and undercoverage are also dealt with.

#### **Description of the calculations**

Aquisitions less disposals of fixed assets consists of about 30 subgroups in the national accounts. They main groups are buildings and structures divided into dwellings and other buildings and structures, machinery and transport equipment divided into transport equipment and other machinery and other capital formation.

#### **5.10.1 Buildings and structures**

Estimates of buildings and structures are based on data from the SBS for most industries. Some reallocations are made and also additions in a few cases. These are described in the following.

Roads in agriculture. This investment is based on data from the National Road Administration, which records the amount of grants paid for the construction of private roads. As the grant is paid at the rate of 60 per cent of the total cost, total investment in roads can be calculated.

Forest roads. The data are obtained from the National Board of Forestry, whose collection provides complete coverage.

For the industry Electricity, gas, heat and water supply the total investment amount is reallocated between buildings and machinery. This is because since the middle of the 1980s Swedish legislation has allowed the distribution structures of utilities to be recorded as machinery investment. This is in conflict with the ESA guidelines, according to which distribution facilities should be recorded as investment in buildings and structures. A certain share of investment in machinery is therefore transferred. The share was determined after contacts with the industry and on the basis of the ratios, which applied in the years prior to the change in tax legislation. The model was reviewed in conjunction with the most recent reorganisation of the SNI, but this did not result in any major changes. The shares vary somewhat depending on the form of ownership and sub-industry involved.

For the sub-industry Electricity and heating supply (SNI 40.1, 40.3) the following shares are used:

Private corporations (limited liability companies, (aktiebolag, AB)), including previously State-owned public service undertakings: 40 per cent of total investment in buildings and structures.

Central government corporations (AB): 44 per cent of total investment in buildings and structures.

Local government corporations (AB): 65 per cent of total investment in buildings and structures.



For the sub-industries Gas supply (SNI 40,2) and Water supply (SNI 41, 90.001) only investment in buildings and structures arises.

For Transport, storage and communication the values of the business statistics are used for all sub-industries. However for For sub-industry 64.2 telecommunications, 80 per cent of the annual value for buildings and machinery is recorded as building investment. This reallocation was calculated, inter alia, using information from the annual accounts of the largest enterprises in the industry.

The housing and real estate management industry consists of the sub-industries individual houses, weekend/holiday homes and multiple-occupancy buildings and other real estate management. The investment also includes so-called agency charges, which cover the remuneration received by brokers and agents for intermediation and sales of available housing assets. Building investment is usually recorded by the capital types below instead of by sub-industries. Machinery investment, disregarding white goods, is not recorded for the sub-industry one and two family houses or weekend/holiday homes.

#### Permanent dwellings

The calculations for new construction of housing are based on monthly data for the number of apartments commenced collected by Statistics Sweden (SM Bo 14). In addition, data are available on total construction cost per apartment for apartments carrying a government loan guarantee, i.e. the great majority (SM Bo 26). The calculations are grouped into two main categories; one and two family houses and multiple-occupancy buildings, respectively. Construction costs are distributed with the aid of a construction cost profile, so that the costs incurred over a given period (year, quarter) can be calculated.

#### Rebuilding and extension of dwellings

Rebuilding and extension of dwellings in multiple-occupancy buildings are compiled from an annual SCB inquiry: The revenues and expenditure survey for multi-dwelling (Intäkts- och kostnadsundersökningen för flerbostadshus, IKU). Data for one and two family houses are compiled from an annual SCB sample survey: Household finances (Hushållens ekonomi, HEK).

#### Weekend/holiday homes

The calculation of weekend/holiday homes is a projection based on SCB monthly statistics regarding building permits, assumed to cover both new construction investment and the reconstruction value. Earlier years, before 2005, are calculated with data from the Swedish Association of Prefabricated House Manufacturers (Sveriges Trähusfabrikers Riksförbund, STR) and the Real estate tax assessment statistics.

Buildings and structures in real estate management is derived as the difference between the total value of SBS minus the investments of the dwelling groups above.

#### Banking and other financial activity and insurance activity

Since the SBS, in this case, doesn't completely include what's required Statistics Sweden's investment survey is the main source for both the final and preliminary calculations.

### 5.10.2 Machinery and transport equipment

The total estimates of Machinery and transport equipment are also based on data from the SBS for most industries. Some reallocations are made and also additions in a few cases. These are described in the following. Administrative registers for vehicles, ships and aeroplanes are also used in order to crosscheck the information of the SBS and also the foreign trade statistics. Transport equipment investment is included in the data on machinery investment for enterprises from the SBS, but not leasing investment. A supplement for leasing investment is therefore included in the calculations. Own financed and leasing investment are recorded separately, specified by industry and calculated in accordance with the models described in section 5.10.9 (Investment in motor vehicles) and section 5.10.10 (Leasing investment).

Agricultural machinery. From 2001 onwards information is collected from the business statistics for various kinds of machinery. For the detailed breakdown on products, an annual machinery survey carried out by the Swedish Board of Agriculture is used. It records the value of tractors and other types of agricultural machinery sold.

Fishing boats and fishing gear. Other machinery investment consists of fishing boats. The source for fishing boats is the Swedish Maritime Administration's ship register..

Offshore. In industry SNI 10-12 a supplement is included for investment in so-called offshore activity. The source for offshore investment is the Swedish Maritime Administration's ship register.

For Electricity, gas, heat and water supply the same reallocation between building and machinery as mentioned above is made using inverted shares.

Transport, storage and communication. Annual information is collected from the SBS regarding the total estimate of machinery and transport equipment. In order to distribute the total estimate on different objects, various sources according to below are used. The calculations are also divided into 16 sub-industries.

*Motor vehicle investment* for the different sub-industries is obtained from the model described in section 5.10.9 Investment in motor vehicles.

*Investment in ships* includes both new and second-hand ships. The main source is the foreign trade statistics for exports and imports and, for production, the SBS. Also an estimate for ongoing works is classified as fixed capital formation and is based on information from the business statistics. Currently information is collected in the foreign trade statistics and Statistics Sweden also catches information from the Swedish Maritime Administration's register on ships.

*Investment in aircraft* is calculated with the aid of Statistics Sweden's international trade statistics. Net imports of civil helicopters with an unladen weight of over 2000 kg (CN 88021200) and civil aeroplanes (CN 88022000, 88023000, 88024000) are counted as investment in aircraft. Checks are made with the aid of the foreign trade statistics in order to ensure that aircraft manufactured in Sweden, which are directly exported are not included as investment.

*Investments in railway trains* is also calculated in annual supply and demand figures including net import, and domestic production of goods wagons, locomotive engines,

passenger trains est.,(CN8601XXXX-8608XXXX) less the intermittent consumption..  
The investment survey gives preliminary figures for investments.

For sub-industry 64.2 telecommunications 20 percent of the total estimate is recorded as investment in machinery.

White goods. In Sweden all new residential properties are equipped to a great extent with white goods (large household equipment), which form part of the total investment value of the property as built. In the event of replacement purchases the property owner bears the cost and finances the replacement through the charge collected from the residents of the property. This means that replacement purchases made by the owner are treated as investment, and that purchases of white goods by tenants are regarded as household consumption. The benchmark for white goods replacement investment was calculated for 1996 with the aid of the housing and rental survey (Hyror i bostadslägenheter, HiB).

It was calculated that 137 000 apartments in multiple-occupancy buildings made replacement purchases of white goods in 1996 to an average value of SEK 4000, which amounts to an investment figure of SEK 548 million.

For owner-occupied apartments we have assumed that the proportion of the total number of apartments, which replaced equipment is the same as for rented apartments. This gives 118 000 apartments with a value of SEK 5500/apartment. The value of owner-occupied apartments in 1996 works out at SEK 649 million.

An annual chaining is subsequently undertaken with the aid of data on new purchases and rebuilding of individual houses and multiple-occupancy buildings.

### **5.10.3 Other capital formation**

Livestock. Investment in livestock, draught animals and dairy cattle relates to net changes in stocks of these animals. The calculations are carried out by the Swedish Board of Agriculture on the basis of numbers reported and unit prices.

Race horses are cultivated assets breed for the purpose to be used repeatedly in the production process. The money from horse races that go back to the horse owners is the basic frame for the calculation in horses. One source for calculation is the Economic Account for Agriculture (EAA) that gives stud farms sales value an a small raising premium. Another source is the wages (horse trainers) for labour SBS SNI 92.614 that gives the increment to the sales value and the raising premium. In the figures are also foreign trade and intermittent consumption figures for product 012280 taken into concern.

Insurance financed constructions. An addition is also made for construction financed by insurance companies. Information on claims paid is available in the quarterly survey of insurance companies.

### **5.10.4 Membership organisations; religious activity (SNI 91)**

Calculations of fixed capital formation for membership organisations are based on an enumeration of the contributions they receive. The contributions are obtained from the annual report of the Financial Management Authority (ESV). The calculation is based on a model in which contributions for fixed investment in buildings (buildings only) amount to 70 per cent of final fixed capital formation. As the business statistics also cover this

activity, there is a further source to be relied on. The present benchmark in the national accounts is somewhat higher than is indicated by the business statistics. Investments of the church of Sweden is gathered from Statistics Sweden's collection of information from this organisation. The church of Sweden, previously included in the local government sector, is a non-profit organisation from 1 January 2000.

#### **5.10.5 Investment of central government**

The calculations are based on the recording by the Financial Management Authority (ESV) of the expenditure of departments and agencies of government by type of expenditure. (5.1, Sources and 5.9, Definitions, boundaries and classifications.)

In line with ESA95, the Manual on government deficit and debt, Part I.V, Botniabanan AB, a railway project, is also included in the investment of central government, since the purpose of the company is to finance and construct infrastructure which, after completion and according to contract, is to be routinely used and paid for by the State. The units of the National Road Administration and National Rail Administration for the production of buildings and structures and the Swedish Export Credits Guarantee Board and public law service offices are included in the calculation of investment in the sector. Purchases of durable goods and construction of fortifications by the Armed Forces are defined as consumption of central government in the national accounts, not as investment.

##### Calculations

Both the National Road Administration and National Rail Administration are extensively involved in the production of structures, which is recorded in EVS:s material separately from government output in the form of responsibility for the railway network and national highways, respectively. Both administrations are thus split up in the national accounts into two local kind-of-activity units each, one concerned with structural activity and the other, in the case of the National Rail Administration, concerned with railway operation and, in the case of the National Road Administration, with road provision and upkeep. The units for structural activity are in both cases treated as producers for own final use, since their own-account investment set up as revenue assets along with income from contract work meet the cost coverage criterion. Investment for own account is thus entered first as a cost, then as income from investment activity, and in addition as a capital cost in the accumulation account.

Neither producers for own final use nor secondary local KAUs, which are classified as market producers, are classified by function in accordance with COFOG. They are covered instead by a classification according to branches of business or industries.

Total central government activity, which is compiled by the Financial Management Authority (ESV), records investment in accordance with the national accounts definitions of economic life being one year or more and the value limit ECU 500, and grouped by buildings and structures, machinery, transport equipment and other equipment, research and development and intangible investment.

Investment in software, both produced for own account and purchased from outside, is calculated using a special model (see section 5.11.2). The calculated cost has hitherto exceeded that recorded in the ESV material in the section on research and development, intangible assets. Consumption of central government is reduced by an amount

corresponding to that by which software investment according to the model exceeds that recorded.

#### **5.10.6 Investment of primary municipalities including public service undertakings**

Total investment expenditure is obtained directly from the investment records of the summary accounts (RS). Investment is calculated broken down by buildings and structures, machinery and equipment, and also investment financed by leasing. Software purchased and software produced for own account are compiled according to special models. Investments are grouped according to the relevant COFOG and activity.

The calculation excludes purchases of land. Purchases of existing buildings and technical structures are also excluded in order to record only new own account investments during the year. In the investment records it is also possible to single out purchased contract services (i.e. new, extension or improvement works both on the municipality's real estate and premises and on streets, roads, parks etc.) and purchases of machinery and equipment.

Building investment, which comprises buildings and structures both purchased and produced for own account, is calculated residually. Purchases of machinery and equipment and purchases of land, buildings and technical structures are deducted from total investment.

Machinery investment with an economic life of 1-2 years is recorded in the operating accounts. Eighty per cent of this amount is reclassified as investment according to a previous consumption survey (förbrukningsenkäten). A corresponding deduction is made from the primary municipalities' intermediate consumption.

Purchases of machinery and equipment with an economic life of more than three years are recorded separately in the investment records of the summary accounts. In order to obtain the net value a deduction is made with the amount sold machinery and equipment, which are recorded as investment income.

#### **5.10.7 Investment of county councils**

Data on investment expenditure are obtained from the summary accounts of the county councils and surveys. The Federation of Swedish County Councils, which is the representational body, trade association and employers' organisation of the county councils, collects data from all the counties/regions. The data are recorded broken down by buildings and structures and machinery and equipment, respectively.

The boundary between goods for consumption and capital goods is drawn by most county councils in accordance with recommendations of the Federation of Swedish County Councils. Goods are classified as investment if any of the following criteria are met

- the item has an economic life of at least three years
- the cost exceeds SEK 15 000
- it forms part of basic equipment in a new building or extension project irrespective of price and economic life.

Purchased software recorded as consumption in the summary accounts is reclassified as investment and at the same time is deducted from the consumption data. Software

produced for own account is treated as new investment in the national accounts (section 5.11.2).

A supplement is also included for leasing, see section 5.10.10.

### **5.10.8 Other types of local authority**

Data on investment for other types of local authority are obtained from the summary accounts of local federations, the annual accounts of the Swedish Association of Local Authorities and Federation of Swedish County Councils, respectively, and statistics on investment grants paid by central government. The most important of these sources are the summary accounts of local federations. This source also gives a breakdown by different activities.

### **5.10.9 Investment in motor vehicles – the motor vehicle model**

#### *5.10.9.1 Sources and definitions*

The main source for calculation of both investment and household consumption of vehicles are Statistics Sweden's vehicle statistics. Statistics Sweden (SCB) continuously receives data on newly registered and deregistered vehicles from the national vehicle register kept by the National Road Administration. The register contains both technical and administrative data on different types of vehicles. All vehicles are registered by either personal code number or corporate identification number. On the basis of these data Statistics Sweden also supplies information on the SNI industry and institutional sector, and a breakdown by legal and natural persons can be undertaken.

For self-employed traders the corporate identification number is the same as the personal code number; in this respect therefore they count as natural persons. From the national accounts point of view, a problem arises from this interpretation. In the national accounts the motor vehicle purchases of self-employed traders are recorded as investment and those of natural persons as household consumption. Motor vehicles purchased by self-employed traders must therefore be identified and transferred to the investment calculation.

By comparing the vehicle data with the SCB enterprise register, it is possible to filter out vehicles owned by self-employed traders. In this matching only traders with an annual income exceeding SEK 200 000 are included. The reason for the income limit is that self-employed traders with an annual income below it probably do not charge car purchases to their businesses. It is more advantageous for them instead to buy the car privately and declare the cost of using a private vehicle for business purposes. This has to do with the fact that taxes on the benefit of using a service car for private purposes is quite high. It is therefore necessary to use the car relatively intensively in the business before this solution becomes more advantageous than purchasing the car privately and entering the cost of using it for business purposes as a charge on the business. Data matching is carried out every quarter.

SNA 1993 (9.48) stipulates that an item of goods that is used both privately and in a business activity – e.g. a car – must be apportioned as to a component representing household consumption and a component representing investment or intermediate consumption. The apportionment must be based on the proportion of the use of the item, which is private and that which is business-related. In the national accounts, however, a

car purchase made by a legal person is recorded as investment and a car purchase made by a natural person as household consumption. But for all service cars, which are also used privately a benefit value is reported to the Swedish Tax Agency which reflects the utility value of a certain car to the person who benefits from it. These data are obtained directly from the Swedish Tax Agency and are entered both under household consumption expenditure and in the form of a benefit classed as pay to the person concerned. See section 3.3 regarding the valuation of the utility element. The car in its entirety, however, is also recorded as a capital item.

In the model, investment expenditure on motor vehicles is calculated for acquisition both in the form of outright purchase and in the form of financial leasing. With the aid of the corporate identification code, vehicles can be allocated to SNI industries. Calculations are performed for four vehicle types: passenger cars, goods vehicles, trailers and buses. The model comprises all new registrations. The numerical data of the vehicle statistics also contain directly imported vehicles, and for these an adjustment must be made since they also appear in the foreign exchange item under household consumption expenditure.

The following sections describe the essentials of the investment calculations for the different vehicle types but, because of the close link, the consumption calculations are also affected to a certain extent. Purchases of goods vehicles and buses count 100 per cent as investment. A small proportion of the acquisition of trailers is included in household consumption, the remainder constituting investment.

**Table 87 Values of the different vehicle types in the motor vehicle model, SEK billion 2005:**

Household consumption of passenger cars	SEK 53.0 bn
Investment in passenger cars	SEK 11.0 bn
Investment in goods vehicles	SEK 7.5 bn
Investment in trailers	SEK 1.7 bn
Investment in buses	SEK 0.5 bn

#### *5.10.9.2 Calculation of passenger cars and goods vehicles*

The annual calculation is based on data on the number of new car registrations allocated to SNI industries and natural persons, respectively, and to car models. The material also contains information on the number of leased vehicles in the various industries.

The data on numbers of passenger cars is combined with new car prices per car model in accordance with a price compilation produced by AB Bilstatistik. Where no price is available for a car model in the source material, an average price for the car marquee in question is assigned. With the aid of the price information, a weighted mean price is calculated which is combined with industry-by-industry data on numbers and a value for each industry is obtained. Goods vehicle prices have been set in cooperation with the Swedish Association of Haulage Contractors for an initial year and are thereafter updated with the price trend for goods vehicles.

The calculations also take account of sales of used passenger cars from the corporate sector to the household sector. This flow of sales from legal to natural persons is shown as a deduction in the investment calculations, and as a corresponding addition in the calculation of household consumption. The transfer varies substantially from year to year and is of great significance to the outcome of the calculations. In order to obtain a more differentiated picture of the background to these fluctuations, stock variations in certain

individual sub-industries are also examined, e.g. the scrap trade, the retail motor trade, car repair workshops, agriculture, forestry and construction activity.

Price data for cars whose ownership is transferred from legal to natural persons is calculated with the aid of a model in which data on the cars' age and corresponding depreciation in relation to new car prices are used. The model was devised after consultation with the motor trade. It is mostly cars previously leased by enterprises, which fall into this group.

Car dealers (legal persons) continuously register new cars in their businesses. Some of the cars are sold to natural persons. They are then recorded as transferred from legal to natural persons, although in practice they are cars newly registered to natural persons. For these cars a special analysis must be carried out. In February each year, therefore, a processing routine is conducted for the previous year covering the number of cars in total stock at 31/12 and, of the total, those newly registered during the year. This processing routine includes re-registration, i.e. passenger cars which were first registered to car dealers but subsequently sold on to private individuals are treated as new registrations to natural persons here and not as cars transferred to them.

The value of investment in the various vehicle types (passenger cars and goods vehicles, buses and trailers) is summed by industry and only the total vehicle investment in the particular industry, broken down as to acquisition by purchase and acquisition by leasing, is recorded in the national accounts system. The investment in vehicles of general government is removed from the relevant SNI industries and allocated to purposes with the aid of a key from 1994, which was developed after special processing of the material.

#### *5.10.9.3 Calculation for buses and trailers*

The statistical source material consists of data on the number of new registrations of buses and trailers, respectively, per SNI industry and the value at purchasers' prices of the total domestic supply calculated as production and imports less exports and with a supplement for trade margins. This value is allocated to the various industries in accordance with the new registration statistics. A small number of trailers are purchased by households and are therefore recorded under household consumption expenditure; hence they are excluded from the investment calculation.

### **5.10.10 Leasing investment**

#### *Scope*

A distinction is made between financial and operational leasing depending on the terms of the leasing contract. A feature of financial leasing is that the contract between supplier and customer is strictly financial in nature, which is illustrated by the fact that the customer is responsible for repairs, maintenance, insurance etc. Financial leasing is thus to be regarded as a form of financing, a means of obtaining credit. Contracts, which cannot be characterised as financial leasing, are classified as operational leasing. Operational leasing usually includes some form of maintenance and guarantee commitment on the part of the lesser. In the national accounts only financial leasing counts as gross fixed capital formation.



Financial leasing is defined as leasing provided by monetary financial institutions (classified as such by the Financial Supervisory Authority), since the quarterly calculations for 2003. Earlier, the population consisted only of finance corporations, excluding e.g. banks, which is why a supplement for Skandiabanken was added to the calculations. The supplement for Skandiabanken was added because the bank's investment consists mainly of leasing investment. In 1997 Skandiabanken's leasing investment amounted to SEK 483 million.

#### *Sources and calculation methods*

The sources used are the motor vehicles model (see 5.10.9 Investment in motor vehicles), the Financial Supervisory Authority's survey of the total supply of leasing items (produced by Statistics Sweden), the SBS business statistics and the investment survey.

Leasing investment in motor vehicles is calculated with the aid of data from the motor vehicle model and is allocated to industries on a detailed level. Leasing investment in machinery is calculated with the aid of data from several sources. For the manufacturing industry, which is covered by the investment survey, data are obtained annually on the value of new machinery leasing contracts relating to the previous year. For other industries the following method is used: the survey of the Financial Supervisory Authority gives information on the value of the supply of different types of leasing items, such as buildings, private cars, other vehicles, other transport equipment, IT equipment, contractors' equipment, engineering machinery, graphical equipment, mobile telephones and other communications equipment, fixtures and fittings for hotels, restaurants or shops, office equipment and miscellaneous. However, the survey gives no information on the industries from which demand for these assets emanates, which is desirable from the point of view of the national accounts. The value of the supply of leasing items is therefore allocated to user industries by the following method. Data are obtained from the SBS business statistics on the financial leasing fees paid by these industries. The industries' respective shares of the financial leasing fees are the key to how the total value of leasing items breaks down among the industries. However, account is first taken of data already known, such as total leasing investment in motor vehicles and total machinery leasing calculated with the aid of the investment survey.

## **5.11 Acquisitions less disposals of intangible fixed assets**

### **5.11.1 Mineral exploration, SNI industries 13.2 Other metal ores, 14 Other minerals, and 74 Other business services**

The data emanate from the Geological Survey of Sweden (Sveriges Geologiska Undersökning, SGU). Data are collected and compiled from telephone interviews on enterprises and private individuals holding prospecting concessions. It is thus SGU's ambition to carry out a full census.

### **5.11.2 Investment in computer programs, program descriptions and ancillary equipment for both system and application programs**

Investment in computer programs consists of two parts, purchased software and software produced for own account. Hardware consultancy services are separately identified and not included here. The Structural Business Statistics gives details about consultant revenues regarding hardware as variable 1487 in SBS.

### *Purchased software*

For the calculation of purchased software the following sources are used:

<u>Source</u>	<u>Variable</u>
SBS	Output service producing industries, changes in inventories
IVP	Output mining+manufacturing industries (NACE 10-37)
UFS	Central government sales
Investment Survey	Structures for market producers and producers for own acc.
BoP/Foreign tradestat	Exports and imports
HBS and Trade ass.	Household final consumption expenditures
Assumption/trend	Intermediate consumption expenditures
NACE72 dvlpmnt+balanc.	Gross fixed capital formation

All industries and sectors that have output of purchased software are included in output of purchased computer software. NACE 72 stands for the majority (approximately 95-97 %) and almost all the remaining output is provided by the sources Industry's production of commodities (IVP) and SBS.

Industry's production of commodities (IVP) output NACE 10-37	702 mSEK
SBS output NACE 72	79769 mSEK
SBS output other industries (mainly service producing industries)	1270 mSEK
<u>Central government sales</u>	<u>300 mSEK</u>
Total output of purchased software	82041mSEK

The calculation of gross fixed capital formation in software purchased consists of two steps. In the first step the gross fixed capital formation in software purchased is determined through extrapolating (updating) NACE 72's production value (computer consultancy industry SNI72) of product group 7220 in current prices.

In the second step a simple balance reconciliation is carried out in order to ascertain whether the trend looks reasonable. The gross fixed capital formation in software purchased is calculated then as a residual between the supply and the use side. Output of purchased software, imports of purchased software, the trade margin and general government sales are added together. Reconciliation is then carried out with exports of purchased software, household consumption expenditure on software and estimated use of inputs and use of investment.

$$\mathbf{GDP = C + G + I + X - M}$$

$$\mathbf{I = GDP - C - G - X + M}$$

where:

"C" is equal to all private consumption, or consumer spending, in a nation's economy

"G" is the sum of government spending

"I" is the sum of all the country's businesses spending on capital

"X" is the nation's total exports,

"M" is the nation's total imports.

These two different methods of calculation must lead to the same result. If not, amendments must be made to the adjustment figure used for extrapolation. For GDP from the production side to be equal to GDP from the expenditure side, there should be no residual in the balance for purchased software.

Since 2004 data from the Investment Survey is used to distribute total investments by industry sector. From the Investment Survey is used the structures i.e. an industry's share in software investments in relation to other industries. In the Investment Survey data is collected on companies' expenditures on software. The advantage of using data from the survey is that the shares can be updated annually. The disadvantage is that it only covers investments of market producers and producers for own final use, and not those of public authorities. For government gross fixed capital formation in purchased software, annual values are determined mainly by applying the growth rates in current prices of output of purchased software to the level of the previous year. The benchmark was set in 1999 based on a survey of NACE 72 which included information on sales to different customer groups. However, the annual SBS also includes a breakdown of industry/product output by customer category, e.g. government sector, which is used in the reconciliation.

The delimitation of GFCF and IC is very difficult when using a supply based method. In the composition of output of purchased software in the NACE 72 industry, four variables are used from the SBS. They are:

- v1481- Sale and license revenues from own account standard software
- v1482- Sale, license and consultant revenues from customer-specific software
- v1484- Other consultant revenues from software
- v1516 – "Publication" of software

It is reasonable to believe that the output value of these variables to a certain extent contain maintenance and support. For the time being there is no information on the size of this share. Until more detailed information is gathered, the IC of purchased software "maintenance and support" share is estimated to be about 20 percent of the production value of purchased software in the NACE 72 industry.

For the part where software is included in or together with a product, there is no reliable information available. Instead assessments have been made to select those industries where this may be relevant, e.g. NACE 72 industry, trade industry etc.

During winter/spring 2009 the National Accounts will evaluate the results from a fairly new survey "Enterprises' IT expenditure". The survey was first carried out referring to year 2005 and has, since then, become a mandatory survey. In the survey, the companies are asked to provide information such as costs and investments in hardware, as well as, purchased software. This survey will hopefully provide better information regarding allocation of use between intermediate consumption and gross fixed capital formation, as well as, more information regarding the structure of the use, e.g. each industry's share of the total IC or GFCF.

#### *Software produced for own account*

Own account software is defined as software created and programmed by a company's own internal personnel. Own account software is intended to be used within the company itself for its own production, not for resale, and as such is treated as an investment.

In accordance with the recommendations of the OECD and Eurostat, a new method for compiling production and investment in own account software has been introduced since 2004.

For the calculation of purchased software the following sources are using:

- Vocational Register: the number of computer specialists (ISCO 88; 213) employed by sector and industry
- Salary Statistics: average salaries for computer specialists employed by sector and industry.
- The survey "Use of IT in companies", that is carried out by Statistics Sweden. In the questionnaire, companies are asked to allocate time spent by computer specialists to three parts

Software development for own use  
Software development for external sales  
Maintenance, support and repairs.

- Structural Business Statistics: production value and salary totals for NACE 72-Computer consultants.
- Price index for product 7220 (Software): to calculate investments in constant prices.

The calculation of gross fixed capital formation in own account software is a multistage process consisting of several steps:

Equals signs are placed between output and investment. The industry that produces must also have investment of its own to the same amount.

$$\begin{aligned}
 \text{Output of own account software} &= \text{Investment of own account software} \\
 &= \\
 &\quad \text{The number of computer specialists} \\
 &\quad * \\
 &\quad \text{Average salaries for computer specialists inclusive employer's contributions} \\
 &\quad - \\
 &\quad \text{Percent share of computer specialists time spent to software development for external} \\
 &\quad \text{sales, maintenance, support and repairs} \\
 &\quad * \\
 &\quad \frac{\text{Production\_value}}{\text{salary}} \text{NACE72 Computer consultants}
 \end{aligned}$$

As a first step in the compilation process new sector distributed data on the number of computer specialists was aggregated into the NA industry codes. After this salary totals were compiled for each industry and sector as the product of the number of employees and average salaries over a year. Salary totals were compiled inclusive of employer contributions.

The data was then adjusted to account for the fact that computer specialists do not spend 100 percent of their time on the development of software but also on maintenance and

support. The adjustment factor for each industry depends on the shares provided in the IT-survey. It varies between 50 and 85 percent.

Finally the adjusted values were transformed into a production value and thus gross fixed capital formation, by applying the ratio between production value and salary totals for NACE 72-Computer consultants to computer consultants' salary totals by industry and sector. Thus intermediate consumption, consumption of fixed capital and a mark-up for net operating surplus is included in the estimated output for own fixed capital formation. A “value of production to wages ratio” is calculated for the NACE 72 industry. This ratio is then applied to industry allocated wages, hence, implicitly intermediate consumption and consumption of fixed capital is taken into account. Software produced for own account is estimated for the following activities, in mSEK:

<b>NACE Aggr.</b>	<b>Market prod 7220EG</b>	<b>Publ &amp; NPISH 7220EG</b>	<b>Total 7220EG</b>
01_05	27		27
10_14	3		3
15_16	195		195
17_19	14		14
20	32		32
21	211		211
22	264		264
23	11		11
24	698		698
25	54		54
26	43		43
27	256		256
28	162		162
29	61		61
30	9		9
31	39		39
32	9		9
33	58		58
34	37		37
35	6		6
36_37	6		6
40_41	217		217
45	53		53
50_52	2568		2568
55	34		34
60	80		80
61	17		17
62	46		46
63	263	12	275
64	2815		2815
65_67	3890		3890
702del	0		0
70ovr	106		106
71	34		34
72	3484		3484
73_75	2243	697	2940
80_85	25	528	553
90_99	411	41	452
Other	0		0
<b>TOTAL</b>	<b>18481</b>	<b>1278</b>	<b>19759</b>

### 5.11.3 Investment in entertainment, literary and artistic originals

As recommended in GNI/022, the Task Force on Entertainment, Literary and Artistic Originals, the estimation of gross fixed capital formation in the form of originals covers literary and musical works and the production of films and certain TV and radio stock programmes. However, they must be covered by copyright, have primary artistic intent,

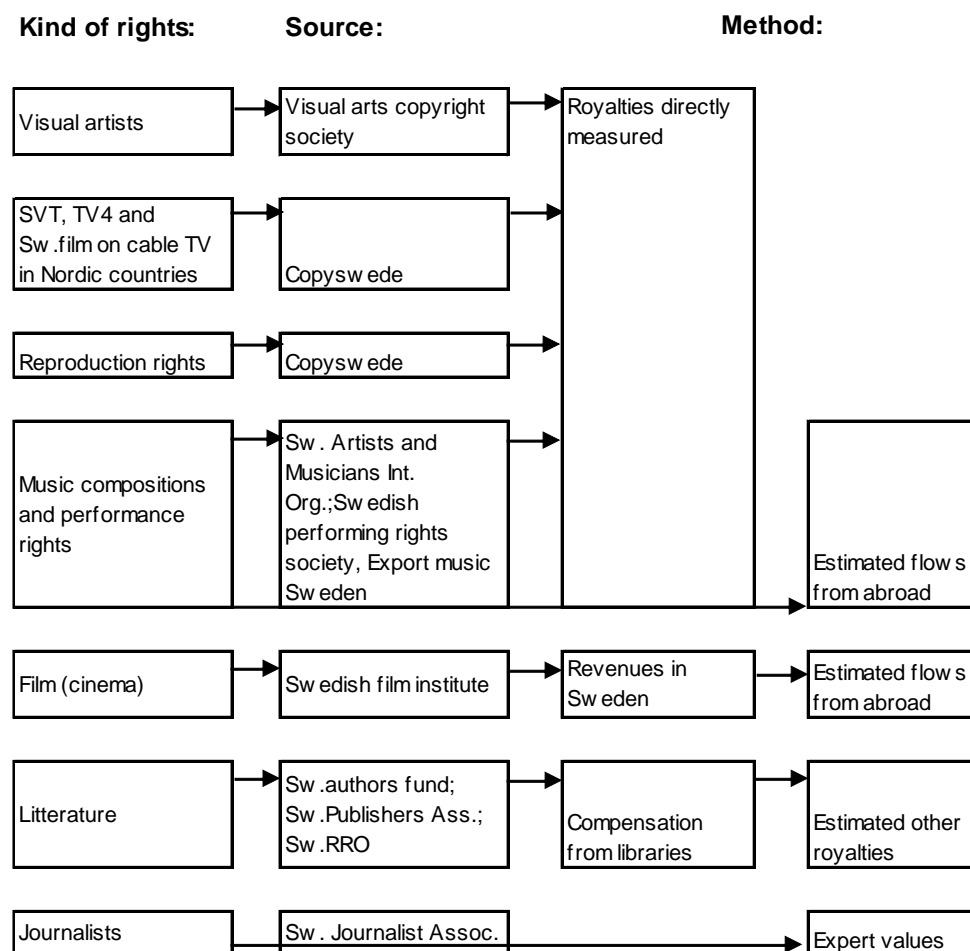
meet the capitalisation criterion of use for more than one year and not be accounted for anywhere else in the NA.

These intellectual property rights are assets, which will give the holder regular earnings for the foreseeable future. When the assets are created and traded, the acquisition and disposal values should be recorded. The current payments which constitute present and future earnings on intellectual property assets will be the capital formation. Two different methods of estimation are recommended.

A production costs approach including a mark-up for operating surplus. Production costs should include any royalty payments made for the use of other originals.

A discounting approach of future returns at the present value. In this approach it is assumed that output and discount factor are on average the same when looked upon over a period of time. The value  $W$  can then be compiled by the help of formula  $W = H * (1 + r - i)$  for each object where  $H$  is the value of annual fees of royalties and copyrights.

Where copyright and related rights generated by a work are collected mainly via management societies, the output of original works is estimated on the basis of the royalties paid by all the Swedish management societies combined to Swedish recipients. The following items are covered:



The methods chosen for the Swedish estimates mainly use data from organisations in charge of copyrights to authors, artists, musicians etc. Information has been collected with the assistance of the respective member organisations. There are a great number of organisations covering a wide range of activities within the area. They all keep annual records on what is paid from clients to the originators.

The pattern of payments under the copyright system is somewhat complicated. Both Swedish and foreign companies or private persons can be registered in Sweden as rights holders and the contents of the member organisations regard them all as Swedish. The information available relates to annual payments of compensation for rights which are either totally new or have existed for an unknown number of years. The calculation, therefore, includes current payments under copyrights and other payments such as royalties, which occur particularly in the field of literature and music. Other occasional income is not regarded as capital formation. Both payments under copyright and royalties in the field of literature and music are included.

Although there are rights' transfers, it is assumed that this is own account capital formation. Data on annual payments are used, irrespective of whether the work is new or not. There is output from the production of originals and any costs for these can be accommodated during one year.

Swedish cinema is defined somewhat differently than other rights, *inter alia* owing to the nature of the available data. Revenue from Swedish cinema in Sweden is recorded as annual revenue, without payment of compensation under the copyright. There are no data on Swedish films abroad at present, whereas Swedish music abroad has been calculated in a research project in cooperation with the organisation Export Music Sweden.

The total estimate of investments in entertainment, literary and artistic originals in 2005 is 2 193 mSEK.

Depreciation is calculated using a depreciation rate of 0,55 for artistic originals. We do not have any empirical data supporting this rate. It is based on an assumption that normally these rights have a substantial economic benefit over few years after the right has been established. We have agreed on an average service life of 3 years but in most cases it is shorter, including video rights and the like. But to include exceptions like block busters a slightly longer service life is chosen. The declining balance value used is the same as is used by BEA for machinery when no other information is at hand, i.e. 1,65. This gives us  $1,65/3$ , which equals 0,55.

## **5.12 Additions to the value of non-produced non-financial assets**

The definition of gross fixed capital formation (ESA 95, 3.102) also covers additions made to the value of non-produced assets arising in the course of the productive activity of a producer or institutional unit. The national accounts in this context calculate gross fixed capital formation for substantial improvements made to land and costs of changes in ownership (intermediation charges).

Drainage in agriculture. According to ESA95 drainage constitutes an improvement of so called non produced investments. Up to 1999, the Swedish Board of Agriculture reported



estimates based on a survey made some years ago. Presently no detailed explicit information is available in the EAA-calculations, so the estimate, which is only 139 mSEK, is held almost constant.

Other forestry operations. Records covered here include forest management operations, such as cleaning, soil scarification, forest cultivation, forest regeneration, forest fertilisation, forest drainage etc. The data are obtained from the National Board of Forestry.

Costs of ownership transfers are calculated for owner-occupied houses (one and two family houses and weekend/holiday homes), multiple-occupancy buildings, agricultural- and forestry properties. The calculation uses data from SBS on prices of real estate (SM Bo 41) and data from the Swedish Financial Management Authority (ESV). The stamp duty paid in conjunction with the acquisition of real estate is also included in the costs of ownership transfers. This is also regarded as a tax on products.

Table 88 Gross fixed capital formation in non-financial non-produced assets 2005.			
SNI industry	Description	Type of investment	Value (current prices)
01	Agriculture	Drainage	139
01	Agriculture	Costs of ownership transfer	288
			427
			1 089
02	Forestry	Forestry management operations	
02	Forestry	Costs of ownership transfer	431
			1 520
			1 947

## 5.13 Changes in inventories

### *Valuation principles*

The value of the inventories of an enterprise is equal to the value of inventories of goods acquired less the value of inventories of goods disposed of in the calculation period. A proportion of these acquisitions and disposals, respectively, are due to true purchases and sales, while others are due to internal transactions within the enterprise. Changes in inventories not due to purchases and sales, however, must be valued as if they were purchases or sales. The reason for this is that the valuation of inventories must be consistent with the valuation of production and consumption, respectively, which is applied in the national accounts.

These valuation principles mean that withdrawals by an enterprise from its own stocks of goods for consumption in production must be valued at the purchase prices applicable to the period in question, which is equal to the replacement price. Products leaving the manufacturing process without any sale taking place must be valued at the sale prices applicable to the period in question. Inventories, which are calculated as the difference

between the stock at the end of the period and that at the start of the period, must be valued at the same price level in both cases. The valuation must be indicated at the average purchase or sale price for the period.

In the structure of the inventories, therefore, products purchased must be valued at the purchase price. Where the products are not purchased from outside but are obtained internally, e.g. directly from manufacture, the valuation must be carried out at production cost plus a profit margin. Withdrawals from stock must be valued at market prices applying at the time of sale and, for internal withdrawals, at the production cost applicable plus a profit margin. Application of these principles ensures that consumption and production are valued homogeneously and independently of whether a market transaction or an internal transfer within the enterprise is involved.

The valuation of inventories in private companies often contains effects, in line with business accounting practice, of both a change in stock volume for a product and a change in price per unit of the product. Only the former effect has to be taken into account in inventories in accordance with the national accounts. The effect of price changes is treated as a holding gain or loss and is recorded as a value adjustment item. For this reason amongst others an adjustment of stock values has to be made when using statistics based on accounting data. In periods of rising prices it may thus be necessary to reduce data for stock price gains, and vice versa.

It is desirable that the statistical data collected from enterprises be presented as far as possible at the valuation level applicable for the national accounts. In certain cases those returning data may have difficulty with the desired recording principles; in such instances they may be permitted instead to explain how the valuation is carried out. On the basis of that information Statistics Sweden undertakes a revaluation to establish the correct values. Administrative data that are sometimes used as statistical source material are normally not valued at the correct level. In these cases too, a revaluation is undertaken to ensure that the data meet the requirements of the national accounts.

To sum up it can be said that only changes in stock volumes are included in inventories in the national accounts. The stock volume change can then be valued at current or constant prices. If the change in inventories is calculated as the difference between opening and closing inventories, which is the most common case, the inventory in both instances is valued at the same price level, average purchase or sale price for the period. The reporting units are asked not to include recurrent losses in their stocks.

#### *Method used to calculate inventories*

The Swedish NA use the “quantity method” to calculate changes in inventories, which means that the changes in inventories are calculated as the difference between the closing stock at the end of the period and the opening stock at the beginning of the period. When calculating changes in inventories by stock data it is important to use short time periods so quarterly figures are much better than annual information. The Swedish figures for inventories are mainly based on quarterly information from special surveys carried out by Statistics Sweden. The annual value will be the sum of the four quarters. Annual balance sheet information from business accounting is only used for small parts of inventories.

Inventories are calculated for agriculture, forestry, mining and quarrying, manufacturing, electricity, gas and water, construction, trade, other service industries and central government contingency inventories.

#### *Agriculture and forestry*

Inventory data in the industries agriculture and forestry are allocated to a few product groups. For agricultural holdings separate records are made for cereal, animals raised for slaughter and field crops and for forestry forest stocks and standing timber. In agriculture supplies of cereals are created the bulk of which are stored by the farmers' organisations and which are therefore recorded as inventories in the industry Wholesale and retail trade. Smaller quantities are stored on farms and stock changes are recorded at the end of every year. In the output calculations the value of crop production is spread evenly over the year. The reason for this procedure is that production activities are carried on for most of the year, whereas deliveries in the form of sales of crops are concentrated on the second half of the year. The difference between production evenly distributed and farm deliveries is treated as production for stock. The whole year value for this item is zero, while inventories are built up in the first and second quarters and correspondingly reduced in the third and fourth quarters.

In forestry, inventories consist of the change in felled timber resources. This item only includes the timber felling enterprises' own forest-based inventories of timber resources. Timber resources, which are held as consumption input inventories by the processing industries or which remain in the forest but have been bought by and belong to the industry, are not included here. These assets instead represent intermediate consumption inventories of manufacturing industry. The inventories of forestry also consist of so-called standing timber in variations in the quantity of timber cut (see description of output in forestry).

#### *Mining and quarrying*

A special quarterly survey is carried out for mining and manufacturing. The inquiry has a sample of 1400 enterprises and the material is grouped into 48 industries. Inventories are collected and compiled for four different stock types:

*Inputs:* raw materials, semi-finished products, components, and other items required for the production and distribution of the finished product.

*Work in progress* (including work in progress on account of another person): products whose processing in the unit has been commenced but not yet completed.

*Finished products of own manufacture:* products which have been processed in the unit and which, regardless of the degree of processing, are ready for sale to customers or are supplied to another unit (possibly in the same enterprise).

*Finished products not produced in own manufacturing* (goods for resale): products that have been purchased for resale without further processing in the unit.

Information is collected separately on the costs of production and on the supplement (addition) made in order to get the basic price of inventories at the beginning and at the end of each period. If the value reported reflects only the costs of production it is corrected in order to reflect the basic price. For work in progress, valuation is according to the cost of production by the producer. A profit based on information from the annual SBS is then added by Statistics Sweden. Production estimates are also adjusted in order to reach consistency.

Changes in inventories are calculated as the differences between the stocks of inventories held at the end and the beginning of the period respectively. Both stocks are revaluated to the average prices, both related to the current year and to the previous year. In the

revaluation care has been taken to type of inventory and average time stored. If the average prices refer to the current year, the value corresponds to volume changes in inventories in current prices. If the average prices refer to the previous year, the value corresponds to the volume changes in inventories at constant prices. Appropriate price indices are used in the calculations, for finished goods and work in progress the deflator is the industrial producer price index ( PPI) by product group. For input goods special price index series are created by using appropriate price index from the Domestic supply index.

#### *Electricity, gas and water*

Inventories in electricity, gas and water comprise stock investment in private, central government and local government corporations and central and local government public service undertakings classified in the industries electricity generating plants, gasworks, heat generating plants and waterworks. They also include inventories from corresponding activities in departments and agencies of local government. Inventories as a whole are made up of almost 10 different types of fuel. Stock figures in quantities are collected in the energy statistics on a quarterly basis.

#### *Construction*

Inventories comprise inventories of goods (inputs). The source is the annual SBS. There is no breakdown of these inventories as to products in the available statistics. Other construction inventories (sale of real estate etc.) are recorded as gross fixed capital formation. Work in progress is reflected in production estimates.

#### *Wholesale and retail trade*

The inventories of retail and wholesale trading include calculations for the wholesale trade (including oil companies), the retail trade and the motor trade (including spare parts and accessories). Inventories do not include stocks of second-hand goods. The trading function, which on resale generates a trade margin, is not counted as inventories but as output in the trade.

The wholesale, retail and motor trade have a quarterly survey of 1800 enterprises and the enterprises are asked about opening and closing stocks. Stocks are divided into 17 groups of goods each and valued at purchasing prices. Changes in inventories are calculated as the differences between the stocks of inventories held at the end and the beginning of the period respectively. Both stocks are revaluated to the average prices, both related to the current year and to the previous year in the same way as for mining and manufacturing. The purchasing prices reported by the enterprises are recalculated to average replacement prices applicable for the period. Care has been taken to type of inventory and average time stored. Price indices from the CPI system, appropriate for each product group, are used in the calculations.

Inventories in *departments and agencies of central government* (so-called contingency stocks) are recorded together with those of the wholesale trade for secrecy reasons. Contingency stocks are calculated in three sub-items: stocks of crude oil, other fuel stocks and other contingency stocks.

#### *Service industries excluding trade*

Inventories in service industries excluding trade are based on SBS estimates and consist of inventories of the type work in progress. A quarterly survey for these industries was launched a few years back, but the quality has not yet been so good that it can be used in the NA. The

stocks in these industries are small compared to the stocks in manufacturing and trade. In business accounting the inventories are valued according to the 'lowest value principle' (LVP). It means the lowest value between the purchase value and the sales value (net). If the purchase value exceeds the sales value, the enterprise has to make depreciation. If the enterprises expect/know that they are going to sell at a loss they have to account for the loss when it can be calculated. The purchase value of the inventory can be calculated according to the FIFO method or weighted average prices.

The following main groups of inventories estimates are distinguished:

<b><i>Changes in inventories, SEK million</i></b>	<b><i>Year 2005</i></b>
<i>Mining and manufacturing industries: Materials and supplies</i>	-2 965
<i>Mining and manufacturing industries: Work in progress, finished goods and goods for resale</i>	-5 395
<i>Trade industries: Goods for resale</i>	6 077
<i>Inventories in electricity, gas and water industry: Materials and supplies</i>	1 118
<i>Inventories in agriculture: Work in progress</i>	-11
<i>Forestry industry: Finished goods (Change in felled timber)</i>	19 558
<i>Forestry industry: Work in progress (Net growing of standing timber)</i>	-23 169
<i>Inventories in construction industry: Materials and supplies</i>	364
<i>Inventories of the service industries: Work in progress</i>	-151

## 5.14 Acquisitions less disposals of valuables

According to ESA 95, gross capital formation of valuables has to be included in the NA. These represent material assets, but are not calculated as *fixed* capital formation, since they do not meet the relevant definition and purpose. The purpose of this acquisition and/or disposal is to "increase value", or at least "to retain value". This distinguishes this heading from consumption and/or gross fixed capital formation in various products.

Valuables comprise the following types of goods:

Precious stones and metals, but not monetary gold

Antiques and other works of arts

Other valuables and collectors' items

The Swedish method relies on calculating assets on the basis of data on exports, imports, trade and new Swedish output. The trade margin, which is calculated with the aid of data on the industry, 'Antique dealers and art dealers', SNI code 52501, is adjusted downwards to take account of a certain share of the trade which is exported, estimated at around 20 percent. The trade margin forms one building block in the calculation. Data on domestic trade is available in the SBS.

Swedish output of new art, which forms the second building block, has been calculated with the aid of data from SOU:1997:190, "Kartläggning av konstnärernas verksamhetsinriktning och ekonomiska förhållanden" (1995). (*Analysis of artists' business activities and economic circumstances*). The survey was carried out by SCB and is a full census. By multiplying the average artistic income in the 'visual and graphic artists' group by the number of performers in the group, we get an income which can also serve as output. Since not all the works produced are inflation-proof, a downward adjustment of 50 percent is made.

Antiques and paintings can be regarded as "pure", in the sense that other products include elements which should not be part of the calculation, but which unfortunately cannot be separated out.

A total value for assets in the form of valuables is obtained by aggregating the trade margin, imports and the Swedish output. The use is exports and gross capital formation. External trade is thus the final building block in the calculation. Gross capital formation is the residual item in the balance. The data on external trade come from the foreign trade statistics. In the external trade CN system, these include antiques, 97060000, paintings, 9701100, collectors' pieces, 97050000 and stamps etc., 97040000. The total value of 369 mSEK for 2005 is distributed according to the following:

Valuables in 2005	mSEK
Swedish production	61
Trade margins	227
Import-Export	81

## 5.15 Exports of goods

Data emanate from the following sources: the international trade in goods statistics, international trade in services statistics, adjustments made to them, the energy balance model and data from current external balance statistics.

**International trade in goods statistics.** These statistics generally speaking follow the EU guidelines for both Intrastat and Extrastat. Data are collected by CN numbers which, on the basis of NACE rev. 1, and are linked to the product classification applied in the national accounts product accounts. Some CN numbers are recorded on this basis as exports of services. Since international trade in goods statistics only partly cover non cross border trade, in some minor cases complementary sources are used.

Invoice values are used in the calculation of exports of goods. This approach also affects the calculation of trade in freight services (see sections 5.16 and 5.18). The reason for shifting to invoice values is that primary statistics fail to meet the necessary requirements for valuing exports f.o.b. and imports at c.i.f. Because of this approach a global f.o.b./f.o.b.-calculation is not carried out.

Theoretically "correct data" at statistical value and at invoice value give the same net exports. However, the division between goods and services of the balance is affected. As the shifting to invoice value allows Statistics Sweden to accomplish a higher quality in the published figures of the NA., there is no impact on the net exports other than a better estimation of these figures. The use of invoice value gives among other things the following advantages:

- Both FTS's Intrastat and transport data are collected at invoice value. In line with the modified invoice based approach, shifting to invoice values allows Statistics Sweden to achieve greater consistency between export and import of goods and of transportation services. Extrastat, which represents 1/3 of the total foreign trade, is nevertheless collected at statistical value. For the present an adjustment has to be made for that reason. Still, with the new method a smaller part of international trade is affected by adjustments than before.
- Other model based solutions, based on estimated data at statistical value, are reduced which eliminates sources of error in the calculation of the balance of trade.

- The valuation of the export-import becomes more consistent with the valuation of production-final uses.
- Greater consistency with price indices used in the calculation of constant prices.
- Data at invoice value is available in the companies' accounts and are easy to collect with good quality compared with the statistical value which often has to be estimated by the companies.

**Adjustments.** Adjustments may arise in connection with reconciliation in the balance of resources and in the compilation of GDP expenditure approach. Adjustments are caused by product balancing and differ from time to time depending on which values that differ from each other. The table below shows the adjustments made in 2003 2004 and 2005. The largest adjustments are explained by "NA-foreign trade corrections" and by "NA-correction of services" on both export and import figures. These corrections consist of, among others, adjustments in transport services and products, SAS, merchanting and FISIM data. The most part of the adjustments on export and import of goods and services are more or less stable over the years . However, "services corrections" on export and import show considerable variations over the time. These variations are explained by the adjustments after the product balancing, which can vary very much from one year to another.

**Table 89**

<b>Export in million SEK. 2003-05</b>			
Description	2003	2004	2005
Total Export	1 101 132	1 215 759	1 333 379
<i>Export of goods corrections</i>			
NA-foreign trade definitions	-2 562	-5 010	-4 669
Energy additions	2 934	3 684	4 041
SAS consortia, 3/7 correction	191	243	224
<i>Export of services corrections</i>			
Shipping/vessel register statistics	0	19	20
Port services, definitions	325	521	622
SAS consortia, 3/7 correction	4 872	5 026	3 096
Fisim, merchanting, definition, etc	15 384	8 751	17 658
<b>Import in million SEK. 2003-05</b>			
Description	2003	2004	2005
Total Import	929 922	1 001 831	1 120 891
<i>Import of goods corrections</i>			
NA-foreign trade definitions	-138	-391	0
Shipping/vessel statistics	3 768	3 340	4 772
SAS consortia, 3/7 correction	953	934	1 194
<i>Import of services corrections</i>			
Shipping/vessel register statistics	538	500	568
Port services, definitions	806	2 493	2 649
SAS consortia, 3/7 correction	4 164	3 904	1 990
Fisim, definition, etc	9 318	4 410	4 912

**Energy balance model.** For energy products complete balances are drawn up for the supply and use of different products. In the energy balances data are derived on exports of fuel for aircraft and ships. With the aim of achieving greater consistency, in particular cases, data from the international trade in goods statistics goods are replaced with energy balances data.

**Repairs of goods.** Repairs are to be treated as goods. Since the international trade in goods statistics does not capture repairs data from international trade in services statistics are used instead.

**Current external balance statistics.** The Riksbank (Swedish central bank) is responsible for the current external balance statistics, which are the main source for statistics on exports and imports of services. The product standard applied in the national accounts system means that certain product data, albeit of marginal significance, are recorded as goods. Like the data from the energy balance, these figures relate to non-cross-border trade with the rest of the world.

**Software goods.** For standard programs the value reported to intrastat equals the total value of the software and the carrier.

## 5.16 Exports of services

Exports of services are obtained from the following sources: the current external balance statistics, Structural business statistics, surveys of the SAS consortia and international trade in goods statistics.

**Current external balance statistics.** The national accounts uses the estimates obtained from the services survey and the complementary calculations that the Riksbank carries a responsibility for. Transactions are recorded when they are entered into the respective company's accounts. This means that most of the time the export and import of services are recorded at the quarter when they are created but some of the services could be recorded after they were created. The extended balance of payments product classification of services, EBOPS, is used. Since this classification does not entirely coincide with that applied by the national accounts in the product accounts, a key has been developed with which a tentative specification by product groups is obtained.

The national accounts follow the product classification of the Riksbank. This implies that in some cases, e.g. construction services national accounts deviate from ESA. Since the national accounts and the Riksbank seek to treat construction services in a consistent manner, this solution is also applied in the national accounts. The Riksbank and Statistics Sweden returned a joint response in May 1997 to the Eurostat survey on "Construction activity in the ROW for a duration of less than a year". The response stressed the need for "clarification of the discrepancy between ESA 95 on the one hand and BPM5/Task Force 2 on the other concerning the treatment of construction activity". Unfortunately no such clarification has yet been obtained from Eurostat.

The construction services with duration less than a year are reported as services instead of cross border income payments (as ESA95 indicates). This means a higher value of trade in services and a lower value of cross border income payments compared to what should have been reported according to ESA95. However this redistribution of the different entries should not affect the total GNI.

In the case of the Öresund Bridge, a joint solution was agreed between Statistics Sweden and the Riksbank and, in addition, with the National Bank of Denmark and the Danish Central Statistical Office (Danmarks Statistik), under which the coast-to-coast installation would be apportioned equally between the two countries and treated in conformity with the ESA.



Shifting from statistical values to invoice values result in freight services being calculated at invoice values.

Data on exports of port and navigation services are calculated on the basis of statistics covering ships entering and leaving ports etc. See also section 3.15.

**Surveys of the SAS consortia.** Because the SAS consortia (SAS Konsortiet) are jointly owned by Sweden (3/7), Denmark (2/7) and Norway (2/7), a special calculation procedure is applied in order to apportion the output of the consortia correctly, see section 3.15.3 above. With the aid of the distribution model, export and import data are projected consistently for each shareholder country.

**International trade in goods statistics.** As was noted above in section 5.15, certain CN numbers are treated as services. The types of service in question are consultancy services for computer systems and software, architectural and technical consultancy services, miscellaneous other business services, film and video services and creative, literary and artistic services.

In exceptional cases exports of services may be subject to adjustment because of reconciliation problems in the balance of resources and compilation of GDP expenditure approach.

As regards exports of insurance and pension services for the non-insurance corporations the costs are estimated as the premiums and the income as compensations. For the different insurance types redistribution is made so that all compensations become transfers. The compensations are divided into transfers and services according to a preset division.

For the collection of computer services, royalties and licence fees, the companies surveyed by foreign trade service statistics are given an extensive set of definitions on what is regarded as payment for royalties, licence fees, computer services and software so that they can report correct service transactions.

## 5.17 Imports of goods

The data emanate from the following sources: the international trade in goods statistics, adjustments made to them, the energy balance model and data from current external balance statistics.

Regarding the data from the sources international trade in goods statistics, adjustments and the current external balance, see section 5.15 above.

For energy products complete balances are drawn up for the supply and use of different products. With the aim of achieving greater consistency, in particular cases, data from the international trade in goods statistics goods are replaced with energy balances data.

Data on non-cross-border trade in goods (repairs) with the rest of the world are only obtained from the current external balance statistics but, as is the case for the export side, such data are of marginal significance. For Swedish freighters bunker abroad a minor adjustment is carried out.

Smuggled goods are included in foreign trade statistics as money is exchanged into Swedish currency, then the value of the smuggled goods are caught in the tourism entry. However, we do not make any calculations of the value of the reindeer herds that are brought over the border between Norway and Sweden for winter and summer pasture.

### **5.18 Imports of services**

For the data on imports of services the following sources are used: the current external balance statistics, surveys of the SAS consortia and the international trade statistics, i.e. the same source material as that used for exports of services. Hence see section 5.16.

## **Chapter 6 The balancing procedure and main approaches to validation**

### **6.1 GDP balancing procedure**

#### **6.1.1 Production and balancing of supply and use tables**

GDP and GNI are calculated and compiled in the part of the national accounts system known as the goods and services accounts. The annual calculations are carried out in a system of supply and use tables (SUT). The SUT are the basic tables which can be further processed into input-output tables. The annual calculations of GDP also includes calculations of employment such as average numbers of employees and hours worked per industry/purpose as well as calculations of wages and salaries. The calculation and balancing is carried out both in a product and industry dimension.

The level of detail for products and uses in the Swedish system is as follows

- About 400 product groups (SPIN/CPA)
- About 134 industries for market producers and producers for own final use (SPIN/NACE)
- About 147 purposes for household consumption expenditures (COICOP)
- About 58 uses for government consumption expenditures per sector, industries and functions (COFOG)
- About 128 uses for gross fixed capital formation, per sector, industries and functions

Sources and calculation methods for the basic calculations are described in chapters 3-5.

##### *6.1.1.1 The supply side*

In the calculation of a year, firstly all basic calculations are performed as described in the previous chapters. Supply, in the form of production and sales, is calculated, classified by industry and product group (COFOG and product group for sales), valued at the basic price. Imports are classified by product group. Customs duties and other import taxes on product groups are included in supply. All values are calculated in both current prices and constant prices of the previous year (t-1) using relevant price indices (e.g. PPI, EXPI, IMPI etc. for the calculations of constant prices).

##### *Complete balances and “known” values*

For certain product groups, where there is access to detailed information, or where there is substantial interest for other reasons, special calculations of complete balances are carried out with all supply and use within that balance. These are then treated in the system as “known” values and are not affected by balancing adjustments except after special consideration and verification.

Such special balances are calculated for energy products, 16 balances, of which most are calculated in both values and quantities. In addition, complete balances are also calculated, for example, for construction activity and for software produced on own account. A number of other “known” values are also specified in the system. In certain cases these constitute large parts of balances, for example motor vehicles or purchased software investment, in other cases they may be small parts of intermediate consumption,

or investment, in an industry/purpose. Known cells are calculated at both current and constant prices and are not affected by general balancing adjustments.

#### 6.1.1.2 Use side

*Household consumption expenditure* is calculated classified according to product group and COICOP. Hence several product groups can be included in one COICOP purpose.

*For intermediate consumption and gross fixed capital formation*, totals are calculated for industries and purposes (COFOG) at current prices on the basis of primary statistics, as described in chapters 3 and 5, and what is known as direct/special information in certain cells (“known” values as described above).

*For changes in inventories* there is information on inventory types and stockholding industries, but very limited information by product. Allocation to product groups is undertaken under the assumption that inventories of work in progress and finished products consist of products typical of the industry. Product allocation of intermediate consumption is assumed to be proportionate to the structure of intermediate consumption in the industry concerned. In that case account is taken of the fact that certain products are not suitable for storage. Allocation to product groups is carried out in the first instance on a relatively undifferentiated level; the further allocation to detailed product groups is carried out in the balancing work. For trade inventories, in which information is also available with a breakdown by industries, intermittent information on the composition of the product range is used for a rough product allocation.

*Exports (like imports) of goods* are allocated to products in accordance with the Combined Nomenclature in the primary statistics. These are linked to the product groups used in the national accounts. *Exports (and imports) of services* are recorded in the balance of payments statistics according to a certain nomenclature, which is converted to the product groups used in the national accounts.

Each use has linked to it a trade margin rate and the VAT rate applicable. Taxes on products and subsidies on products are also allocated to use.

#### 6.1.1.3 The calculation procedure

In the calculation of an annual sequence all data are calculated in accordance with the sources and methods described. These constitute the basis for the supply and use tables. All reconciliations are carried out in the SU system. The SU tables are calculated and balanced at both current and constant prices (t-1) simultaneously.

In order to cover changes in relative prices, all uses are reflat and deflated using a price index derived by product for domestic supply (inhemsk tillgång, IHT). The price index for domestic supply is derived as follows output + imports + sales by departments and agencies of government and NPISHs + customs duties and other import taxes – exports. The calculation is performed at both current and constant prices and the price index is derived implicitly. The IHT index does not cover changes in tax and margin rates. After reflat/deflating, therefore, corrections are made for changes in taxes on products and subsidies. Such changes affect use at purchasers’ prices and thus mean that the IHT index is (implicitly) adjusted.

## Calculation of intermediate consumption and gross fixed capital formation

For those parts in which data on exact product allocation is not available each year, i.e. intermediate consumption and investment in machinery and equipment, the structure of the previous year as regards product allocation is used as a first assumption.

Data, which are directly calculated, i.e. with full identification as regards both product and use, are calculated at both current and constant prices (using a relevant price index e.g. CPI, PPI, EXPI, IMPI etc.). This applies to household consumption expenditure and exports and to the “known” values.

### 6.1.1.4 Adjustment to calculated totals at current prices

The SUT are adjusted to the calculated totals (according to the statistical sources) for intermediate consumption and gross fixed capital formation per industry/sector/COFOG. The difference between the initial estimates in the SUT and the calculated totals per use affect each product proportionally.

### 6.1.1.5 Product balancing

When the first version of the SU tables have been produced at both current and constant prices, the actual analysis and reconciliation work is undertaken. During the calculation of a definitive year all products have one person who is responsible for the balancing procedure of that product. The person is chosen after his competence about the product/business area. Analysis is done in both current and constant prices simultaneously. If there is a residual between the supply and use, among other things a comparison of the growth rates and price index is done. A comparison of how the supply and use side has developed during the year is also made. If there are big differences between them a comparison of the different sources for the supply and use side takes place to determine which one of the sources is the more reliable. We also collect information from for example branch organisations in order to get more input.

We do not have exact pre-balanced and ex-balanced versions of SUT. The practical work is an ongoing process with each of the 400 product groups until we have a final balanced total system. As this is a very time consuming job, we start evaluating supply and use for many products before all basic information is completely entered into the system. For example some information on HFCE for certain products like petrol, insurance, rentals may be added at a somewhat later date than other figures. So instead of waiting until all information is available we start evaluating the balances that contain sufficient information.

The evaluating procedure involves examination and quality checking the estimates from the supply side – production sales of non-market producers, import, taxes, subsidies on products – and from the use side – intermediate consumption, HFCE, GFCF changes in inventories, export- in order to make the most appropriate reconciliation between supply and use. We can then see if there is consistency between different sources and go back to the primary statistics to have verification and cross checking of the material. We can for instance see that exports of a product does not exceed production, if some products have very volatile changes etc. As this procedure is made simultaneously in current and constant prices with a time series perspective we can also register strange movements in price and volume indices.

Examples of balancing adjustments on HFCE in 2005 made in the balancing procedure:

Tobacco	-1433 mnkr
Dental care	+640 mnkr

Another balancing adjustment on the use side was export of pharmaceuticals with -1.000 SEK billion.

Any additional information on changed structures is entered. This usually consists of data from intermittent inquiries. An example is the inquiry on intermediate consumption, by product, in the manufacturing industry, which is carried out annually for one-third of the industries. Similar inquiries have been carried out in recent years for intermediate consumption in primary municipalities and county councils. Work is also in progress for intermediate consumption in the service industries.

Product reconciliation is undertaken for the 400 product balances. It is not unusual that there are initially residuals between the supply and use sides in the various product balances. Certain product balances are defined and calculated in such a way that residuals should not arise by definition. If this is the case nevertheless, it will be due to an error of some kind, which is generally easy to correct.

Investment in inventories is entered in conjunction with the product reconciliation. As indicated above, product information is relatively undifferentiated as regards changes in inventories. Allocation to detailed product groups is carried out on the basis of the residuals, which arose for the product groups.

The product reconciliations include a verification of the calculations and structures contained within the system. Working from the supply side, input and investment structures are adjusted according to the product structure of the supply unless no specific information is available. Margins may also be subject to adjustment after plausibility assessment.

The adjustments mean that discrepancies may arise between the totals of the system for intermediate consumption and investment industries with respect to the totals originally calculated. Adjustment to totals for IC and GFCF in machinery and equipment is carried out continuously during the balancing procedure. The discrepancies are distributed on a proportionate basis.

#### 6.1.1.6 Balancing at current and constant prices

Since the reconciliations are carried out simultaneously at current and constant prices, a decision must be made for each measure taken as to whether the adjustment should affect both current and constant prices, i.e. affect the volume growth, or whether the change should affect either the current or the constant price, hence affect the price index and/or the volume growth.

#### 6.1.1.7 Industry balancing

At a relatively early stage in the balancing work, industry analysis with variables such as output, intermediate consumption and value added at current and constant prices is also performed. Other variables in the generation of income account, compensation of employees and other taxes on production and subsidies are analysed simultaneously at current prices.

#### 6.1.1.8 Simultaneous balancing of industries and products

Thus, in the analysis and reconciliation work, products and industries, supply and use, prices and volumes – in which considerable importance is attributed to time-series aspects – are assessed simultaneously in both current and constant prices.

In the balancing process all variables may be affected. However, it is only in exceptional cases that the variables included in general government consumption at current prices are changed. Product allocation may be adjusted, but total intermediate consumption or production is seldom corrected. Clearly the balancing work may lead to the detection and correction of errors or anomalies in the basic material, but corrections on grounds of balancing proper rarely arise. The reason is that the calculations are based on comprehensive and detailed material that can hardly be called into question. The material for the general government sectors is also complete in so far as it covers total transactions for the sectors, which provides good verification possibilities in several ways.

As previously noted, the main approach in the calculations is somewhat geared to the expenditure side. The basic statistics are on the whole well developed and detailed. Output calculations are generally more difficult to verify as regards both coverage and definitions. Much of the output statistics is based on data from business accounting. Clearly there are a number of reasons why such data can be misleading. Companies, at least the smaller ones, may have reason to, e.g., under-report their output. The findings of the 2006 report from the Tax Agency of hidden income supports this. Difficulties can sometimes also arise in making the definitional adjustments, which are necessary in order to comply with the national accounts definitions.

The end result is that, when all other checks, plausibility assessments and corrections have been made, the final reconciliations involve an adjustment of intermediate consumption in the various industries.

#### 6.1.1.9 Residual items

The tables which are finally published do not contain residuals on the two-digit level, but only on the more detailed level. The residuals, which remain in the product balances, as regards goods, are treated as a reflection of insufficiencies in the product allocation of changes in inventories. There are also effects of inconsistencies in the coding of data from various branches of statistics. It may happen, for example, that the same enterprise supplies different data on its goods to the statistics on industrial goods production and to the international trade statistics. Such inconsistencies are sometimes corrected in the national accounts after contacts with the primary statisticians; however, sometimes no correction is made but instead the discrepancies give rise to residuals in the balances on the detailed level.

Residuals in the service balances are generally due to inadequate reconciliation in the coding between production/sales/imports and use in the form of consumption and exports.

## 6.2 Other approaches used to validate GDP

### 6.2.1 Labour input, productivity trends, trends in earnings

Labour input calculations constitute an integral part of the national accounts and serves as an extra control of the accuracy of the estimates. Data are calculated using essentially the same industrial classification as the output calculations. The calculations cover average numbers of employees and hours worked, with a breakdown by business operators and employees. These data are combined with data on output, intermediate consumption, value added, wages and salaries etc., and the industry analysis referred to above is supplemented by an analysis of industry labour productivity trends and trends in earnings

for time series. These key estimates are important tools for checking that estimates and developments over time are reasonable. Analyses result in an adjustment of any of the constituent variables. In the course of the analysis discussions are held with representatives of various primary statistics producers regarding the content and quality of the statistics. The national accounts may also examine data from individual enterprises in order to be in a better position to interpret the statistics. The analysis carried out by the national accounts often leads to errors being detected in the primary statistics.

### **6.2.2 Sector accounts**

The Swedish national accounts are complete in the sense that they comprise both the goods and services accounts (*produkträkenskaper*, PR) and sector accounts (*sektorräkenskaper*, SR). The goods and services accounts precede the sector accounts in the calculation process, but the calculation of an annual sequence is not final until also the sector accounts are completed. As explained in Chapter 4, the calculation of the institutional sectors is not entirely dissociated from the product accounts calculation. Total income is determined from GDP. This means that the trend in incomes and their allocation to sectors is an interesting analysis variable, in the same way as the allocation of net lending to sectors. Also savings and the connection to household and government expenditure add to the quality of the estimates. Large unexplained changes in the household savings rate indicate errors in the estimates of income and/or consumption. In this way the sector accounts act as a support to the overall assessment of NA.

### **6.2.3 Financial accounts**

The national accounts group also produces financial accounts, which measure the net lending of sectors. At present, the compilation of the non-financial national accounts (product and sector accounts) and financial accounts is not fully synchronised, so that comparisons between net lending calculated from the real and financial sides, respectively, can provide a support to the balancing process for all sectors. Regarding sources and methods reconciliation of non-financial and financial accounts is only viable for government sectors.

### **6.2.4 Company profiling group**

A unit within Statistics Sweden has been set up to keep special records of the 50 main companies. Their reporting in various surveys is of very high importance for the NA estimates. Therefore this work is a good contribution to increased quality of all source statistics and also for the NA.

**6.2.5 Service level agreements** with producers of primary statistics. A document stating what should be delivered and when and of which quality is set up between NA and suppliers of data. The contents of the various surveys are assessed to a special scale according to a check-list. Meetings are held with the producers and questions are cleared out. Feed back is also given to producers of primary material.

**6.2.6 Meetings and seminars** with (at least) the most important users of the NA. After every quarterly release information seminars are given. Users then give their view on the material and also criticises and questions the estimates produced. Discussions with trade organisations who often have their own statistics and also ideas on the development in their areas/industries.



**6.2.7 EDP, WAT, Satellite accounts and regional accounts** contains data broken down on a more disaggregate level than the NA. These compilations then help to verify and check the national estimates. The work with all the details in the excessive deficit procedure and the work with compilations of the weighted average tax contribute to increased knowledge and quality in other parts of the NA.

**6.2.8 Major revisions of time series** when new information has been supplied or mistakes in used sources or models are detected.

**6.2.9 Internal quality checks**, reports and inventories of methods used. Quality reports have been produced for a number of years for all statistical products. Now Statistics Sweden has selected the (EFQM) Excellence Model for Quality Management and operations development. Statistic Sweden continuously works towards the standardisation of working methods, IT support and methods that serve to increase quality assurance and quality control. As a part of this goal, Statistics Sweden is working towards certification according to the international standard ISO 20252:2006, IDT. In 2008 Statistics Sweden has started a work aiming in compliance with ISO 20252. Screening has been completed of 213 selected statistical products and for the remaining Areas for improvement will be identified in the autumn of 2009 and a continued improvement work will be started where necessary. Among the selected statistical products is not only production of primary statistics which serves as input to the national accounts but also the processes of the national accounts.

#### **6.2.10 External audits**

The NA has been checked by the IMF, the European Court of Auditors, the GNI auditors of Eurostat, but also The Swedish National Audit Office. This work helps to make clear that the methods and sources used are documented, updated and in accordance with the international guidelines.

## **Chapter 7 Overview of the adjustments made to ensure exhaustiveness**

The main approach in the calculations focuses on the expenditure side. It should be possible to estimate expenditure in an optimum manner by way of a painstaking evaluation of households' consumption expenditure, comprehensive statistics on general government consumption and well developed inquiries on investment, inventories and international trade.

This method diminishes the problem with the black economy provided that the sources are exhaustive and of good quality. There is no reason for households to hide expenditures and there is no reason for companies to underestimate outlays such as investments. The borderline between intermediate consumption and investments is of course important to control, but in this case the accounting rules of company accounting and the system of national accounts are very close, except for certain areas where special calculations have been made.

Quarterly inventory surveys have been produced for industry and distribution since the 1960s and, in 2001, were supplemented by a quarterly inquiry on inventories in the service industries. Annual data on the service industries is also obtained from the Structural Business statistics.

Calculations from the output and expenditure sides are balanced with the aid of annual supply and use tables. The tables cover around 400 product groups and 134 industries; household consumption expenditure is recorded for 147 purposes in accordance with COICOP; consumption expenditure of departments and agencies of government is allocated to sectors, industries and functions (COFOG), which makes 58 uses. Gross fixed capital formation is broken down by sector, industry and function (COFOG), split on 128 uses in the economy.

The supply and use tables are produced simultaneously at current and constant prices, and the constant price calculation is carried out in a consistent price index system. Hence analysis of trends at constant prices can affect the current price balancing. The balancing technique often involves the adjustment of intermediate consumption in industry.

The conclusion of these arguments is that a system based on good expenditure information is exhaustive. For the production approach as well as the income approach the problems with underreporting are more obvious.

The national accounts have been revised during 2007. The accounts were revised due to new information, like foreign trade in services and the introduction of an extended enterprise statistics. The estimates for black economy were revised mainly based on a new investigation made by the Swedish Tax Agency in 2006. Illegal activities regarding home production and smuggling of alcohol, smuggling of tobacco, drugs, prostitution and gambling were introduced. Furthermore adjustments of some models were made. The level of GDP and GNI was raised.

In order to comply with the international guidelines and definitions set down in SNA93 and the European in ESA 95 various special adjustments have to be made. Most of these are now taken care of already in the processing of the primary statistics. However, some explicit allowances, based in some cases on models are made in the final stage of the processing.

**Table 90 Explicit allowances in the national accounts**

<b>Explicit allowances in the national accounts</b>	Million SEK	Relation to GDP
VAT fraud	7727	0,28
Output for own consumption and gate-sales etc	6977	0,26
Other black supplements on production or interm. consumpt.	71255	2,61
Mineral exploration	385	0,01
Purchases of software	44 205	1,62
Own-account production of software	19 759	0,72
Investment in entertainment, literary and artistic originals	2 193	0,08
Valuables	369	0,01
Land improvements, changes ownership	1 947	0,07
Brokerage charges	12 819	0,47
Extra fringe benefits for employees (above taxable income)	14 576	0,53
Leasing of machinery	13 624	0,50
Leasing of transport equipment	19 806	0,72
Illegal activities	5 188	0,19
FISIM production	66 835	2,44

VAT is calculated in the supply and use system by applying the proper VAT rate per product in the system of national accounts. The difference between the calculated amount and the amount paid to the Tax Authorities is compiled. The compilation of VAT fraud follow the Council Directive on VAT fraud 98/527/EC. VAT-calculation is reduced for the use if an evasion is an agreement between seller and buyer (with complicity).

Some activities which in company book keeping are not recorded as production or investment may however be so according to the SNA93 rules. Specific adjustments and models are then created in order to satisfy the rules laid down. This is the case for many of the items listed above. Also financial leasing and softwares have to be recorded in the national accounts as investments of the user. Therefore special models has to be applied to such items.

Generally all transactions that are agreed upon between two parties should be included in the national accounts. This is the reason why also hidden activities like not reported production or over reported costs should be included. Also illegal activities based on mutual agreement should be included. This is the case for smuggling of alcohol and tobacco, trade in drugs, prostitution and illegal gambling. For more information on estimation methods, see a report on the web.<sup>2</sup>

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<sup>2</sup> <http://www.scb.se/statistik/NR/NR0102/Illegal%20activities.pdf>

FISIM is the calculated output of financial intermediation. It is the main part of income for money transaction handling institutes. A special compilation method based on the difference in interest for loans and acquisitions and stock values has been developed for catching this production. See chapter 9 for a description of the method.

## 7.1 The production approach

The Structural Business Statistics, which are the main source for the output calculations, began in 1997 and are essentially a census. All non-financial corporations in industries 10-95 were included for the period 1997-1999. From the year 2000 and onwards the whole population for Agriculture, Forestry and Fishing is also included, as the material is now complemented also with sole traders for these industries. However, the national accounts still obtain information from other sources for SNI 01-05. As regards fishing, SNI 05, estimates from the SBS are now used for the national accounts calculations. Also for Financial corporations, full annual censuses are carried out. Enterprises in SNI 65-66 are subject to supervision by the Financial Supervisory Authority, and statistics from all enterprises are collected and reported in the publication *Finansiella företag* (Financial corporations). SNI 67 is however only partly covered by the SBS. Therefore the calculations are for the time being model-based.

Explicit supplements for the output value are applied for the following activities, based to a large extent on the audit investigation made by the Tax Agency.

**Table 91** Explicit supplements for hidden activity

NACE		GVA mill. SEK	Hidden	Percent
A	Agriculture, hunting and forestry	25 611	2 681	10,47
B	Fishing	589	185	31,4
C	Mining and quarrying	11 694	48	0,4
D	Manufacturing	470 025	5 188	1,1
E	Electricity, gas and water supply	70 107	0	0,0
F	Construction	109 005	15 975	14,7
G	Trade and repair services	267 405	7 947	3,0
H	Hotels and restaurants	35 379	5 825	16,5
I	Transport, storage and communication	162 613	8 433	5,2
J	Financial intermediation	106 576	353	0,3
K	Real estate, renting and business activities	488 713	22 098	4,5
M	Education	15 481	649	4,2
N	Health and social work	49 226	3 306	6,7
O	Other community, social and personal service activities	47 951	10 558	22,0
P	Private households with employed persons	697	174	25,0
	GVA market prod. & prod. for own final use	1 861 072	83 420	4,5
	Authorities of central government	128 047	0	
	Authorities of local government	362 577	0	
	NPISH	36 466	0	
	Total gross value added	2 388 162	83 420	3,5
	Product taxes, net	347 056		
	GDP market prices	2 735 218	83 420	3,0

In construction, output is measured with the aid of investment and repair expenditure, so that problems of hidden data in the construction industry are substantially reduced. The explicit supplement for construction activity, which is applied covers work on owner-occupied dwellings.

Output statistics of construction activity have been produced since 1994 and is now also included in the SBS. The stability of the estimates as regards level and trends has varied over the years; it has therefore not been possible to use it for estimation in the national accounts.

Incomes in kind (benefits) and gratuities. Information is collected by the Tax Agency. Their information, on the web and brochures, contains a long list on what items that should be included. The NA however only asks for information divided into three groups. They are car benefits, petrol benefits and other benefits. The most significant income in kind in Sweden concerns concessionary cars, which an employer provides for his employees. Car benefits, however somewhat increased compared to the taxation estimates, are added to the employer's output value and to households' consumption. Other benefits in kind are e.g. meal benefits and concessionary housing. Meal benefits arise almost exclusively through the sale by an employer of restaurant vouchers to his employees at a reduced price. This benefit is included in the supplement applied to households' consumption expenditure in relation to the results of the household budget surveys. Concessionary housing is captured by the calculation model applied. A rental value is calculated for all dwellings in the country and is assigned to final expenditure. A special arrangement has been done in Sweden for personal computers in order to improve the use of computers. The employee can rent a PC from his employer and pay the rent by reducing the wages. This rent is regarded as income in kind in the national accounts and added to wages and salaries and household consumption. Output of PC rentals is also added to the output figures for different industries.

Gratuities are relatively uncommon in Sweden. It is mainly in the restaurant and taxi trades, and possibly hairdressing that tips are given.

## **7.2 The income approach**

The income approach in the present structure for the economy as a whole is determined by the level of GDP from the expenditure side. To wage and salary totals are added income in kind in accordance with the rules laid down by the tax authorities. Adjustment for cases in which these amounts have not been reported is covered by a supplement for "black" wages and mixed income. In order to obtain the GDP level calculated from the expenditure side, substantial supplements must be applied for wages and salaries and mixed income compared with the values obtained from the tax authorities.

The supplement for "black" wages in 2005 amounted to SEK 35 billion, which represents 3.2 per cent of the payroll total excluding "black" wages. For mixed income the supplement amounts to SEK 115 billion, which represents 73 per cent of the mixed income recorded in the national accounts.

### *Tips*

As earlier explained tips is not so common in Sweden. It exists in some restaurants and in taxi cabs. According to the instructions tips should be included in the Household Budget

Survey (HBS) so the information used to settle the level of household consumption by resident households includes tips. The value of tips is however not explicitly shown in the survey. Swedish law requires that a service charge should be included in restaurant bills, therefore the level of tips is expected to be low, even from tourists. The supply/use balancing process, together with specific additions to HBS data and the exhaustiveness adjustments, would guarantee that tips are treated evenly and completely in both output and consumption.

As the HBS information does not include consumption by non-resident households in Sweden they are added to the figures in order to cover all consumption. The source for consumption by non-resident households is the currency exchange. This source will also include tips since all money used by non-residents in Sweden is registered.

In order to achieve exhaustiveness use is made of as many sources as possible. Since it is a well-known fact that households underreport restaurant consumption in the HBS additions are made. This addition will also cover underreporting of tips. From the Tourist Satellite Account the restaurant consumption by non-resident households have been estimated using the currency exchange information as a base for total consumption by non-resident households. Together with intermediate consumption of market and non-market producers, the total expenditure of hotel and restaurant consumption showed a need for adding 10 billion SEK to the output of hotels and restaurants in order to achieve exhaustive figures.

**Table 92 Model calculation of hotels and restaurants**

		SEK million	source
1	Household consumption, HBS	42842	HBS 2005
2	Non-resident consumption	18827	TSA 2005
3	Intermediate consumption	29524	SUT 2005
4	Total consumption, market values	91193	Sum 1+2+3
5	VAT	14308	SUT 2005
6	Tot consumption, basic prices	76885	Sum 4-5
7	Supply from statistical sources	86145	SUT 2005
8	Underrecording in HBS	9260	Sum 7-6
	Household consumption, final estimate	70929	Sum 1+2+8

Discussions with the taxation authorities and the hotel and restaurant association have been held. The taxation authority has no specific information about tips. The hotel and restaurant association says that tips are very seldom given in Sweden as service charge are always included and specified in the bill. Payments are also more and more made by the use of credit cards, on which the total amount is available.

In order to satisfy the EU audit claims a model estimation of tips in restaurants and taxis has been added although there is no specific source for this. The total value of tips is estimated to 0.4 billion SEK in 1999. The tips-rate for non-residents is estimated to 5 per cent in dinner restaurants and taxis. For residents tips has been calculated by using an average rate of 1 per cent. The tips-rate for non-residents is higher than for residents since

it is not common among residents to pay tips. However, most tourists come from our neighbouring countries and have the same behaviour as Swedes and this has affected the tips rate for non-residents.

### **7.3 Households' consumption expenditure**

A large number of different sources are used in order to calculate and check the various consumption items. The calculations are based on both expenditure amounts measured annually and on the updating of benchmarks for a certain year with the aid of value or volume indicators, which are obtained from statistical inquiries and administrative material. In certain cases extensive balancing operations are carried out.

Households' consumption expenditure is based on separate calculations for the various purposes. The data are assessed for each case individually. Comparisons with other material, inquiries and calculations in many cases offer scope for checking the plausibility of the household expenditure calculated. In Sweden we have the advantage of that many data in different administrative registers are coded in the same way, which considerably facilitates comparisons.

#### *Household budget statistics (HBS)*

The household budget statistics (HBS) are the only consistent inquiry, which measures households' consumption expenditure as such. In these inquiries Statistics Sweden has endeavoured to measure the expenditure of households with definitions, which are as close as possible to those of the national accounts.

One of the problems of using certain other data sources is that it is difficult to obtain the exact proportion of total sales income, which is accounted for by households. But, since the HBS is a relatively small sample survey, the HBS material produced is critically scrutinised. In cases in which the HBS estimate is not of a level consistent with data from other sources and there is reason to place greater confidence in other sources, the HBS estimate is discarded. Special attention is of course devoted to those items, which tend to be underestimated in HBS inquiries, and expenditure, which is poorly covered because of the composition of the sample, for example households of persons aged over 79.

Annual comparisons with estimates from later HBS from 1999, 2000, 2001, 2003, 2004 and 2005 have also been made. Estimates based on a three year surveyed population is also compiled. Unfortunately, HBS of later years have not been in compliance with other sources for the household expenditure estimates, but seem to be underestimating most items. The surveyed population does not seem to be large enough to give reliable results.

Therefore the calculations of household consumption are built up with the aid of a number of other sources to a large extent. Information on retail sales from 2002, turnover statistics, VAT records and a special question on sales to households in the Structural Business Statistics are sources used.

#### *Retail trade 2002*

This is a survey in which a detailed breakdown of products sold was made. A matrix showing share of sale for different products by COICOP is built up. It contains in combination with some service surveys the breakdown of 100 COICOP classified item on

70 activities. From 2004 and onwards the SBS contains a survey for collection of annual information.

*Turnover statistics, VAT records, Structural Business Statistics*

In order to estimate the trend from an initial year onwards, in many cases Statistics Sweden's quarterly turnover statistics for the retail trade and service industries are used. The trend in the turnover statistics is continuously compared with the turnover trend obtained when the data on VAT payments are processed statistically. Here adjustments can be made to the turnover statistics, if the VAT material is considered more reliable. The trend figures from the turnover statistics are also compared on an annual basis with the results obtained when the annual business statistics are processed. Also turnover comparisons are undertaken for industries which are of interest in this context. The SBS also includes a question on to whom the output is sold, e.g. households. This information is also used to validate household estimates.

Food sales are recorded on a very detailed level from casher registers, thanks to a very good co-operation with the main food-chains in Sweden. They represent about 85 percent of the market. A special VAT-rate on food makes it possible to compile the grand total of food sales.

*Further balancing procedures*

In the calculations use is also made of a variety of other detailed information, which can be collected for various goods and services. Examples of such material are records of departments and agencies of government, trade associations and membership organisations or supervisory bodies that exercise surveillance, collect charges or pay grants in relation to the scale of an activity. Register material for vehicles, real estate and other matters and intermittent industry inquiries as well as reports and studies on different activities are also used.

The Swedish national accounts are based on an input/output system in the context of which all supply and use of goods and services is arranged in a system of product balances. This provides an opportunity of checking calculated consumption of goods and services for households' consumption and other use against the supply of the corresponding goods and services. If there are differences between supply and use a residual item arises, and special analysis is then devoted to the good or service in question and any measures necessary are taken to balance supply and use.

The product balancing technique means that benchmarks in households' consumption can be affected. In the benchmarking an important criterion in the evaluation of household budget data, for example, is the results obtained from the product balance reconciliations.

The calculations for household's petroleum consumption are effected in the national accounts special energy balances. For petroleum products there are statistics from a number of sources, and these are coordinated in five different product balances, in which the allocation to different user groups is specified.

Analysis, balancing and adjustments thus arise for all the 248 product groups, which make up the smallest building blocks of households' consumption allocated to purposes.



## **7.4 General government consumption**

The material provides complete coverage since data are collected for all activities. For both central and local government consumption separate inquiries are conducted geared to the needs of the national accounts and covering all components of government final consumption. A plausibility check of the material is always carried out when it is received by Statistics Sweden. Comparisons in the form of time-series are also made in order to detect any major divergences between years. As regards the local government statistics the result of the inquiry is also returned to the data providers, inter alia in the form of key figures, which facilitate comparisons between different municipalities. The respondents then have an opportunity to correct their data if they consider that any error has arisen.

Adjustment for definitional differences between ESA and the statistical sources is carried out for software and financial leasing as described in chapter 5.

## **7.5 Investment**

From 1997 onwards all non-financial corporations (except for unincorporated enterprises in SNI 01-05) have been surveyed by way of the Structural Business Statistics. And from 2001 onwards also SNI 01-05 are completely covered.

From this source it is possible to collect investment data in accordance with Swedish accounting rules covering all enterprises in Sweden, with the exception of SNI 65-66. The material is supplemented when there are differences between the accounting rules and the national accounts definitions. This applies to software purchased and produced on own account and investment through financial leasing but also to short-term investment (1-2 year investment). A special question is introduced in the SBS to cover short-term investments.

For construction investment special calculations are carried out in industries in which purchases and sales play a major role, since the net recording in the Business statistics of buildings purchased minus buildings sold does not always give satisfactory quality at industry level. In addition data are required on investment in new buildings for the output calculations of construction activity. The value of new construction, extensions and reconstruction of buildings is obtained from special surveys in addition to the SBS, and reconciliation with the comprehensive data of the SBS is carried out.

For industries in which both business statistics for enterprises and investment surveys lack coverage or provide poor coverage, alternative sources are drawn upon. This applies in particular to agriculture, forestry and to real estate management.

## **7.6 Employment**

The national accounts calculation of the average number of persons employed in the economy as a whole is based on demographic employment data from the Labour Force Survey (LFS). A supplement is applied for employees aged over 64 and less than 16 and for military service personnel in order to comply with the ESA95 definition of employment. The source material for total employment is therefore separate from the sources used for the output calculations. A number of sources are used for the allocation of employment to sectors and industries, where possible the same sources as for the

output calculations. Using different sources for the total and for components sometimes leads to discrepancies. The national accounts benchmark for number of employees in the economy as a whole, however, is considered to fall within the LFS 95 per cent confidence interval. Adjustment is then undertaken for under-coverage. Any discrepancies with respect to the LFS are not separately recorded.

### 7.6.1 Sources

This section presents the sources used in the national accounts for the calculation of the number of persons employed. In the national accounts the LFS estimate is used as the benchmark for the total number of persons of ages 16-64 and employed in the economy. Statistics Sweden's methodology unit has undertaken an evaluation of sources for the employment statistics, which shows that the LFS is the inquiry, which provides the best estimate of total employment in the economy. Other sources used by the national accounts are the Structural Business Statistics (*Företagens ekonomi* – FEK), Labour statistics based on administrative sources (*Registerbaserad arbetsmarknadsstatistik* – RAMS), the Business database (*Företagsdatabasen* – FDB) and the inquiries Wage and salary structures and employment in the central government sector, county councils, the primary municipalities (*Lönestrukturstatistik inom statlig, landstingskommunal och primärkommunal sektor*). The scope of the various sources is stated in the source descriptions below. Estimation of the number of persons employed in the economy differs from one source to another. The differences are due to different population demarcations, reference periods and measurement methods. No complete information on the scale of the non-response error, measurement error and coverage error in the various inquiries is available. Therefore it is not possible to quantify the combined effects of the differences between inquiries. The most obvious differences between a particular inquiry and the LFS are explained in the section in which the differences are discussed without giving any assessment in figures.

#### *Labour Force Survey*

The Labour Force Survey (LFS) is an individually based sample survey covering all persons in the population register aged 15 but not yet 75. In the calculations of detailed annual national accounts primarily data for persons of ages 16-64 is used. The purpose of the LFS is to describe the current employment situation and to provide information on trends in the labour market. The sample consists of three separate samples, one for each month in the quarter. Every month 21 500 persons are interviewed and the three surveys are rotated in such a way that one eighth is renewed between two successive inquiry dates. It should be noted, however, that major changes in LFS took place between quarters one and two in 2005, when a new, more thoroughly EU-harmonised survey was introduced. Because of this reorganization and the work with the creation of time series links to older LFS data, the sample size was temporarily reduced in 2005.

Up to the end of 1992 the LFS only covered one week per month, but from 1993 all weeks in the year were covered. This means that each inquiry month normally contains four or five measurement weeks. In order to be counted as employed in the LFS, a person must have performed at least one hour's work in the measurement week concerned, either as a paid employee or self-employed trader or as an unpaid helper in a business belonging to a member of the house-hold.

### *The Structural Business Statistics*

The Structural Business Statistics (SBS) are a full census, which in 2003 replaced the previous inquiries with the same name. That product had replaced “Business financial statistics” (*Finansstatistik för företag*) and “Industrial statistics” (*Industristatistik*) back in 1997. The inquiry constitutes the basis for the national accounts output calculations and also provides information on the structure of industry, for example, with respect to employment, profitability, growth, trends, financing and output.

About 15 000 large enterprises are surveyed to get special detailed information. The remaining 850 000 enterprises are investigated through administrative material from the Tax Agency. In order to be included in the frame population the enterprise must be deemed to have engaged in activity during the year, i.e. have been active. An enterprise is regarded as active in the FDB if it has reported persons employed to the Swedish Tax Agency or has paid VAT or “F” tax. The population includes all enterprises, which are active during the reference year, excluding financial corporations.

SBS records the number of enterprises, number of employees and economic variables on enterprises and their activity units.

As regards employment, the number of employees is based on the Labour statistics based on administrative sources (RAMS) combined with help information on full-time persons collected from the enterprises annual reports. It is the later estimate that is presented in the SBS as the number of employees during the year. In the national accounts SBS is used in the context of employment chiefly to allocate the average number of persons employed to industries among market producers

### *Differences between LFS and SBS*

The differences between the employment estimate in SBS and the estimate in LFS would in general be the same as the differences between LFS and RAMS (see below) since RAMS is the basis for the estimate in SBS. However, SBS use a different frame population than RAMS (and LFS). The frame population in SBS consists of a sample drawn from the business database in November each year, which means that only enterprises, which are active during November, are included in the sample. The frame population in LFS is Swedish residents between 15-74, based on the Total Population Register. With respect to the enterprise population, LFS covers all weeks during the year and therefore all enterprises that are active during the year. Another difference is that SBS estimate the number of employees from an enterprise perspective. People that work for more than one employer are therefore calculated more than once. In the LFS a person is only counted as employed once, no matter how many employers he or she have.

### *Labour statistics based on administrative sources (RAMS)*

RAMS comprise four sub-registers, the main one of which is the Employment register. The statistics are based on a wealth of administrative data, and several of the statistical sources used for the production of the Employment register are other statistical products of Statistics Sweden, such as the Total population register and the Income statement (KU) register. The intention of RAMS is to provide annual information on employment, commuting, industrial structure and personnel structure in enterprises and at business establishments and to provide information on events and flows on the labour market. The employment situation is recorded in November each year. For business operators the criterion is that during the year they must have had an income from active involvement in

economic activity of at least SEK 100. The indication of the number of employees provides the annual average number of persons employed. RAMS contain the most detailed information on employment and is used in the national accounts to allocate the number of employees on a detailed industrial level.

#### *Differences between LFS and RAMS*

RAMS differs from LFS in terms of population to the extent that it does not measure persons who are unemployed. RAMS measures employed persons aged 16 and over; LFS measures employed persons aged 15-74. RAMS is based on the employment situation in November each year. LFS measures the average number of employees over the year. Persons employed according to RAMS are those who have received an income during November; LFS defines employment on the basis of time worked.

The statistics from RAMS and LFS are intended to provide long-term and short-term descriptions of employment. The reason why RAMS estimates a lower level for the total number employed can be explained chiefly by the fact that RAMS measures the employment situation in November and the LFS measurement is an average from a continuous inquiry. In addition persons who are unemployed are not included in RAMS, since only persons who are economically active are measured. Finally traders who record a deficit are omitted, along with family members assisting in private businesses.

#### *Wage and salary structures and employment in the central government sector, county councils, the primary municipalities*

The inquiries are full censuses and take place in cooperation with the Swedish Agency for Government Employers and the Swedish Association of Local Authorities and Regions which collect individual data from departments and agencies of central government, county council units and primary municipalities. The inquiries are conducted once a year and the target populations cover all employees during the year in the various sectors of government up to a certain date. The purpose of the inquiries is to provide annual information on wages and salaries and employment in central government, county councils and municipalities in terms of level, trends and structure. The inquiries are used in the national accounts to set benchmarks for the number of employees in the various sectors.

#### *Differences between LFS and Wage and salary structures and employment in the central government sector, county councils, the primary municipalities*

The inquiries described above measure all persons employed, whereas LFS measures employees in the age range 15-74. The inquiries for the general government sector are based on the status on a particular date each year (the date varies from one inquiry to another but is either 1 September, 1 October or 1 November). LFS measures the average number of persons employed over the year.

The difference in level between the two sources is due to the fact that the LFS is a sample survey, which gives less reliable estimates for sectors and industries than for the economy as a whole. The above-mentioned inquiries are full censuses.

**Table 93 Comparison of sources for the year 2005**

	<b>LFS*</b>	<b>RAMS</b>	<b>Wage &amp; salary structures &amp; employment in central, county and local government</b>
No of employees, total	4029600	3879192	
Differences compared with LFS		-150408	
Differences, per cent		-3,7	
No of employees in general government	1326600	1285020	1239900
Differences compared with LFS		-41580	-86700
Differences, per cent		-3.1	-6.5

### **7.6.2 Comparison between the Labour Force Survey and the Structural Business statistics for 2005**

In order to ensure completeness in the national accounts the Labour Force Survey (LFS), which is the demographic employment inquiry used for the national accounts, is compared with the Structural Business Statistics (SBS), which provide consistent information on employment and output. The comparison refers to 2005.

As noted earlier (under 7.6.1), the two sources differ in respect of population demarcation, reference period and measurement method. The combined effects of these differences cannot be quantified. One difference that have not been mentioned earlier but should be pointed out in this comparison of industries is the LFS includes non-profit institutions serving households (NPISH), which the SBS does not. The number of persons employed in NPISHs was 83 700 persons in 2005. Deductions of NPISH have only been done on an aggregated level since the LFS don't have estimates of NPISH per industry. Deductions from the LFS are shown in the tables.

In this context it should be made clear that, although the SBS only measure numbers of employees in its employment estimates, all enterprises are included, i.e. also private firms and partnerships, in the estimation of variables such as output and value added.

#### *Results*

Altogether the LFS level in the industries compared is approx. 31 500 persons lower 2005 than in the SBS or, in percentage terms, 1,2 per cent lower. Worth noticing, since the SBS estimate mainly refers to the status in November 2005, is that the LFS estimate for November 2005 is about 2,5 percent higher than the annual average in LFS for 2005. This indicates that the SBS estimate would be a bit lower if it could be calculated as an average over the year. The fact that there are such wide variations between different industries can be explained by at least two factors. To begin with, the LFS is not particularly reliable at industry level and needs to be compared at the highest possible level of aggregation. Secondly, a comparison between the two sources is difficult to make, since they are so different and it is not possible to make all adjustments, which would be needed in order to achieve absolute comparability. The comparison made show, however, that the estimations of employment from both sources roughly agree. Thus there is nothing to indicate that the estimates of output need to be adjusted because of discrepancies between the LFS and the Structural Business Statistics.

**Table 94 Comparison between LFS and the Business statistics, 2005, no of persons in 100s.**

SNI	Est. no of employed persons LFS 15-74 year	Deduction for NIPSHs	Est. no of employed persons LFS 15-74 year	No of employed persons, SBS	Difference LFS and FS (LFS-FS)	Difference LFS - SBS in percent
A, B	449		449	460	-11	-2,4
C, D	6493		6493	7 234	-741	-11,4
E	251		251	287	-36	-14,3
F	2073		2073	2 148	-75	-3,6
G	5142		5142	5 157	-15	-0,3
H	1060		1060	1 057	3	0,3
I	2542		2542	2 724	-182	-7,2
K	5154		5154	4 766	388	7,5
M	621		621	441	180	29,0
N	1118		1118	1 068	50	4,5
O	1673		1673	712	961	57,4
Totalt	26 576	-837	25 739	26 054	-315	-1,2

### 7.6.3 Comparison between the Labour Force Survey and the national accounts

The Labour Force Survey (LFS) indicates the level of average number of employed for the total economy in the age range 16-64, excluding compulsory military service personnel. In LFS the purpose is to measure employment for Sweden's population, hence persons that are not registered in the population register, but are employed in Sweden, are not included. According to ESA95 definitions, all labour input that contributes to the production should be included in the employment. In order to comply with the ESA95 definition and hence achieve comparability with the national accounts, supplements must be applied in the LFS for persons older than 64, persons younger than 16, military service personnel and for persons employed in Sweden but not registered in Sweden's population records.

The level in the national accounts for the number of persons employed is set to correspond to the level in LFS, with adjustment for the above mentioned under-coverage issues in LFS. The comparison between National Accounts and Labour Force Survey is illustrated in the table below.

**Table 95 Average number of persons employed according to National Accounts (NA) and Labour Force Survey (LFS), in 1000s**

	Year 2005 In 1000s
Total economy according to LFS	4229
Supplement to comply with ESA95 definitions:	
Persons age 65 and above	76
Persons age 15 and below	17
Military service personnel	11
Adjustment for domestic concept	16
Total economy according to NA	4349

#### 7.6.4 Conclusions

The national accounts make use of several sources for the estimation of employment in the economy; the Labour Force Survey serves as a basis for the estimation of the total number of persons employed in the economy. Earlier evaluations of the sources for the employment statistics carried out by Statistics Sweden's methodology unit show that the Labour Force Survey is the inquiry, which provides the best estimate of total employment in the economy. Other sources are used for estimating certain industries and the general government sector and as a basis for the allocation of industries on a more detailed level. The estimation of the total number of persons employed in the economy varies from one inquiry to another, which is due to differences in population demarcations, reference periods and measurement methods. The combined effects of differences between inquiries are very difficult to assess, since it has not been possible to quantify the extent of measurement error, non-response error and coverage error in most sources.

### 7.7 Analysis of labour costs ratios and labour productivity

The first calculations of compensation of employees, average number of persons employed, hours worked and value added are confronted on a detailed level of economic activity to evaluate if results are reliable. Does combining of data give reasonable result? If not, feedback is given to primary statistics to find out what is causing the problem. Adjustments are mainly done for detailed economic activities where some discrepancies between the sources may appear. If major differences occur when comparing estimates, this will lead to further investigation on potential errors in the primary statistics.

***The main analytical variables are:***

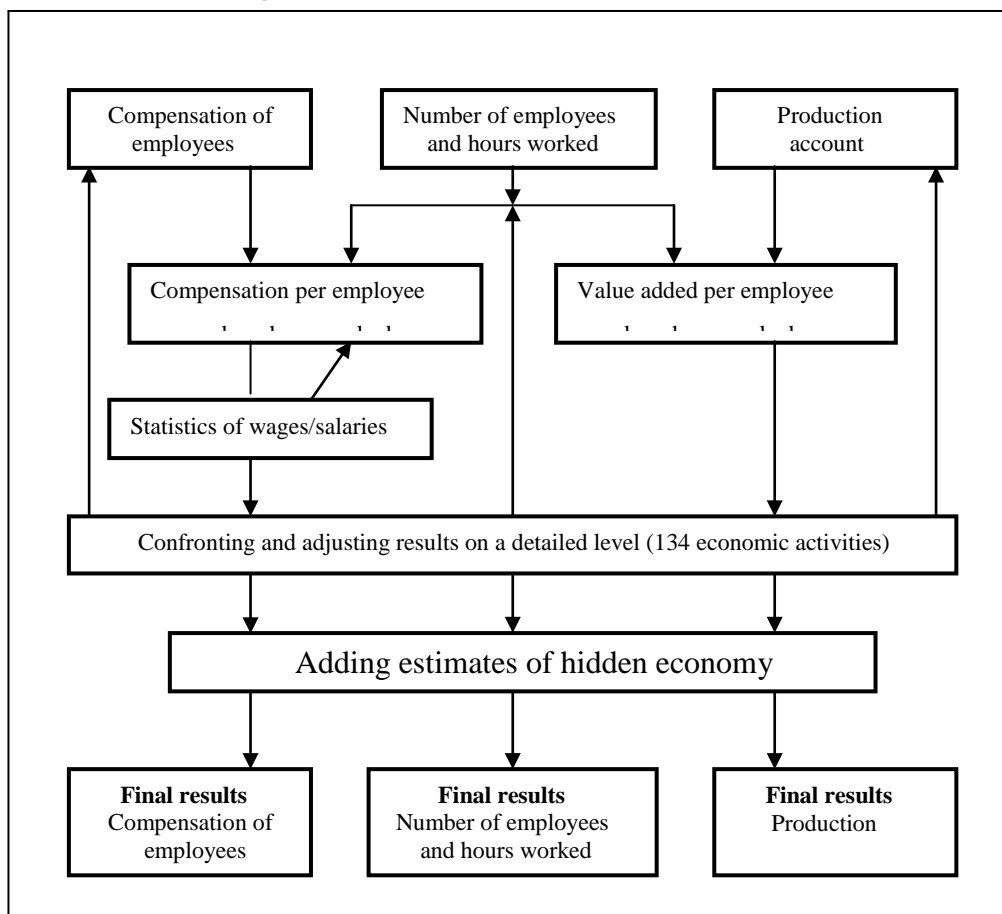
- Comparing earnings per person and per hour in NA with data on earning and labour cost statistics.
- Comparing hours worked and value added – the labour productivity measure.

The analytical variables are reviewed with the help of other statistical sources. For example hourly earnings are compared with Wages and salary structures in the private sector and Short-term statistics, wages and salaries, private sector. As to labour productivity some information is drawn from FEK otherwise there are no separate sources that examine labour productivity. Therewith the analysis of this variable has to be based

on assumptions on what developments can be considered reasonable. The analyses are done on a detailed level as well as on different aggregates.

When data sets have been confronted and the balancing procedure is finished the final step is to add estimates of hidden economy.

**Scheme 1 Confronting separate estimates**





## Chapter 8 Transition from GDP to GNI

### 8.0 Introduction and reference framework

#### Main sources used

External trade in services

Foreign Direct Investments – assets and income

Balance of payment - Monthly survey on direct investments

Balance statistics for non-financial companies

There is a very close cooperation between Statistics Sweden and the Swedish Central Bank. Meetings and other contacts take place continuously.

As the name indicates, gross national income (GNI) is an income concept, but it is calculated on the basis of gross domestic product (GDP). GNI is calculated by adjusting GDP for primary income to and from the rest of the world. Primary income consists, on the one hand, of tax and subsidy transactions to and from the EU and, on the other hand, compensation of employees, interest, dividends, reinvested profits from direct investment in the rest of the world, property income attributed to insurance policyholders and, finally, rents.

The data for most of the transactions are collected from the balance of payments, BoP. Statistics Sweden collects the bulk of the material on commission by the Swedish Central Bank. To get gross accrual figures on taxes to and subsidies from EU data from the Swedish Financial Management Authority (*Ekonomistyrningsverket* ESV) is used.

Data on compensation of employees, revenue and transfers in the balance of payments statistics have been adapted to the fifth edition of the *Balance of Payments Manual* (BPM5) and the Eurostat recommendations of October 1997. Adaptation going back to 1992 has also been carried out on a more aggregated level.

#### *Quarterly survey on external trade in services*

Starting in 2003 the Central Bank of Sweden stopped using payment notifications from banks supplemented by direct reporting from agents of government and companies as a source for collecting data on services to/from the rest of the world. Statistics Sweden was assigned to make a survey on exports and imports of services. The following table shows the size of the adjustments made of GDP to GNI in 2005.

**Table 96 Adjustment of GDP to GNI for 2005**

GDP at market prices, SEK m		2 735 218		
<i>Transition to GNI:</i>		<u>Inflow</u>	<u>Outflow</u>	<u>Net</u>
D1	Compensation of employees	2 597	3 998	-1 401
D2	Taxes	-	8 187	-8 187
D3	Subsidies	12 482	-	12 482
Of which:				
D31	Subsidies on products	1 114	-	1 114
D39	Subsidies on production	11 368	-	11 368
D4	Property income	263 615	270 632	-7 017
Of which:				
D41	Interest	71 630	133 610	-61 980
D42	Dividends	90 113	62 908	27 205
D43	Reinvested profits	101 872	74 114	27 758
D44	Returns, technical reserves	n.a.	n.a.	n.a.
D45	Land rents	n.a.	n.a.	n.a.
Adjustment of GDP to GNI:		278 694	282 817	-4 123
<b>GNI</b>		<b>2 731 095</b>		

Note: D41 is recorded inclusive of D44 and cannot be specified.

## 8.1 Compensation of employees

From 2003 these data are part of the quarterly survey on external trade in services. Wages and salaries earned and also other remuneration is covered. Wages for construction work is separately recorded. Swedish building sites in the rest of the world are considered as producer units in the RoW and wages paid to Swedish building workers employed on these sites are therefore considered as coming from the rest of the world even if they are paid from the Swedish firm. Information concerning embassy personnel is obtained from the Ministry of Foreign Affairs. ESA 95 requires gross recording, and a calculation on taxes is made at the processing unit of Statistics Sweden. The estimate however covers wages and salaries earned in a foreign country irrespective of the length of the stay. ESA 95 has a maximum of one year. This divergence is considered to be of minor significance in practice.

## 8.2 Taxes on production and imports

Data on taxes only arise on the outflow side. They consist of customs duties, VAT, agricultural levies and sugar levies, which make up parts of Sweden's dues or contributions to the EU and are recorded as transactions which affect precisely taxes on production and imports. The GNI levy, which is also part of Sweden's contributions to the EU, is recorded instead as a current transfer. Data is obtained directly from the ESV (see below).

## 8.3 Subsidies

The data on subsidies apply to both subsidies on products and other subsidies on production from the EU and therefore only affect the inflow side. It is mainly a question of subsidies to agriculture. These data are obtained from the ESV, which compiles the basis of central government net lending. The material also comprises that part of the activity of central government, which is not recorded in the national budget. The national budget records the subsidies, which departments and agencies of government pay out but which are financed by EU funds. The departments and agencies are obliged to record types of expenditure under budget headings. This enables the ESV to determine how payments are distributed as between subsidies and other expenditure.

## 8.4 Interest

Returns on financial assets and debts include interest. See section 8.5 below regarding concepts relating to financial returns and sources etc. Since the data in the balance of payments statistics on financial returns are structured in accordance with the main items in the financial balance, three types of interest income and expenditure are distinguished.

*Interest flows linked to direct investment.* These represent interest on loans in a direct investment relationship. Interest paid to affiliated companies, such as intra-group banks etc., are included. The interest is recorded on an accrual basis.

*Interest flows linked to portfolio investments excluding financial derivatives.* These comprise interest on bonds and money market instruments, which are recorded, specified by resident sectors, rest of the world and in Swedish kronor and foreign currency. Interest on Swedish bond issues in foreign currency abroad is recorded as accrued interest. In order to obtain accrued interest in respect of interest on stocks, which arise mainly through trade, e.g. securities issued by the State and housing institutions and securities issued abroad, the Swedish Central Bank carries out separate calculations.

*Interest on loans etc., including interest on financial derivatives.* Recording has been mainly on an accrual basis since October 1997, previously in respect of the payment date.

The data are collected mainly by direct reporting by transactors who have stocks of assets or debt vis-à-vis the rest of the world involving large amounts; a guide value, but not an absolute limit, is approx. SEK 200m. All the major banks report information on interests by country. Estimates for other monetary financial institutes are calculated based on the reports from the banks. Non-financial enterprises are covered by the survey on Balance Statistics for non-financial companies (BAST).

Interest data are recorded on an accrual basis as regards bonds and money market instruments. Recording on an accrual basis means that the interest has been entered in the company's profit and loss accounts. This also applies in the main to other interest flows, but only with effect from the fourth quarter of 1997. This is when the Swedish Central Bank implemented its adaptation to BPM5 and Eurostat's application of the IMF recommendations. Before that recording was mainly on a payment basis.

For FISIM calculations see chapter 9.

## 8.5 Distributed income of corporations

The distribution concept covers, apart from interest, dividends on shares in portfolio investments, repatriated share dividends and reinvested profits from direct investments. As far as the data of the SAS consortium on financial returns, interest and dividends are concerned, the treatment is the same as for other enterprises since no rate of apportionment in respect of the ownership pattern is applied. See section 3.15 on the treatment of these consortia in general.

Returns on portfolio shares comprise distributions from holdings amounting to less than 10 per cent of the share capital or voting rights. The distribution is recorded on an accrual basis. The data are obtained for debt securities by direct reporting while earnings on equity securities are based on calculation.

Dividends on shares in a direct investment enterprise are recorded partly in respect of the date of payment and partly when the dividends are payable.

Returns on direct investment are calculated as the net amount of financial income and costs. The data are obtained from the annual accounts of the group to which the enterprises belong (consolidated figures) and are recorded after tax paid in the host country. Depreciation, capital gains and capital losses are not included.

Direct investment means investment in which a person, usually an enterprise, directly or indirectly acquires ownership of 10 per cent or more of the shares or votes in an undertaking in another country. The direct investor may be an individual or a private or public corporation, an associated group of individuals or corporations, a State or a government body or another organisation. Direct investment may arise from the formation of a new or acquisition of an existing company and from consequential investment, e.g. loans, shareholders' contributions and new issues. Direct investment is thus a financial concept referring to the inflow of capital to an enterprise in another country, as distinct from real investment in machinery and equipment.

An annual sample survey is conducted on direct investment in the rest of the world which makes use of a register continuously updated with the aid of information from Statistics Sweden's register of direct investment companies, newspapers and magazines etc. Direct reporting agents for the continuous reporting are selected, inter alia, with the aid of the survey register. Data collected on financial services are supplemented by a calculation of brokerage commission on dealing in shares.

Dividends from UCI:s are included in the Swedish NA, both dividends actually paid and dividends that are reinvested in the funds. Figures are calculated both for Swedish investments abroad and for foreign investments in Sweden. We have information about the value of investments by Swedish persons and institutions in funds in foreign countries from a special enquiry sent to 400-500 financial institutions. Banks also report the value of investments made by private persons. The information is by country and the average return from the different stock exchanges is used to receive total dividends from UCI:s. The same method is used to calculate foreign owned UCI:s in Sweden. There is information about how much is owned by foreigners on the Swedish stock exchange from VPC (Värdepapperscentralen) and foreign shares in Swedish funds.

## **8.6 Reinvested earnings on foreign direct investments to/from the rest of the world**

Reinvested earnings constitute that part of a company's results, which are not distributed to the shareholders but are retained in the company. These earnings are calculated as the difference between the company's total profit after tax and the distributed profit. Data on distributed profits are obtained via annual direct reporting discussed above.

Whereas dividends are recorded by date of payment, reinvested earnings are attributed to the year for which the company declared the profit.

## **8.7 Property income attributed to insurance policy holders (D44)**

This income comprises the total of primary income generated by investment in so-called insurance technical reserves. Such reserves are invested by insurance companies and pension funds in financial assets, land or buildings. (On the other hand, all net income from the investment of the insurance companies' equity capital is excluded.) The technical reserves are assets of the policyholders. The investment return is attributed to the insurance policyholders as property income. However, this is retained in practice by the insurance company and pension funds and must therefore be treated as though the policyholders had paid premiums and contributions of a commensurate amount to the companies and funds in question. These premiums and contributions are added to the premiums and contributions actually paid.

Statistics Sweden obtains information through its collection of data from the insurance companies on how they invested the reserves, which they do mainly by way of portfolio assets. The returns are also reported but are not recorded separately. The stock of life insurance policies held by the household sector in the rest of the world is calculated and the returns to shares and other assets are allocated, though this is not recorded separately.

## **8.8 Rents on land and on sub-soil assets (D45)**

The rents received by landowner constitute a form of capital income; but not rental on buildings on the land in question, which is treated as a service. The same applies to royalties, which the owner of deposits of minerals and fossil fuels collects on the granting of licences to other institutional units for the exploration or exploitation of such deposits.

These transactions are not applicable in the case of the rest of the world. It follows from the accounting rule that transactions between residents and non-residents for land and sub-soil assets are deemed to occur between resident units. And in that case the non-resident party accrues a financial claim on a notional resident unit according to BPM5, 312. It is considered that this property income, if it exists at all, is of minor significance as far as Sweden is concerned.

## **Chapter 9 The exclusion of the effect of the allocation of FISIM on GNI**

### **9.1 Introduction**

Since 2005 all member states of the European Union are obliged to allocate FISIM by institutional sector. The FISIM calculations are defined in Council Regulation (EEC) no. 448/98 of 16 February 1998 and implemented by Council Regulation (EC) No 1889/2002 of 23 October 2002. The regulations treat the production and allocation of FISIM as well as the breakdown into intermediate and final consumption.

FISIM is exclusively produced by financial corporations engaged in financial intermediation of loans and deposits for which they control the rate of interest. Approximately 60 percent of the FISIM production takes place in banks, which account for a dominant share of loans and deposits.

### **9.2 Sources**

Sources are the Swedish Financial Supervisory Authority (FI), the Riksbank (the central bank of Sweden), the Swedish National Debt Office (RGK) and the Swedish National Financial Management Authority (ESV).

The main sources for the FISIM calculations is the Riksbank's, compiled by Statistic Sweden, monthly balance data of monetary financial institutions, MFI and the Swedish Financial Supervisory Authority's quarterly balance and profit and loss data for financial enterprises. Import and export of FISIM is calculated using the Riksbank's Balance of Payment data on inflow and outflow of interest.

Additional data is taken from the Riksbank's Financial Market Statistics, FMR and the Swedish National Financial Management Authority's, compiled by Statistics Sweden, annual accounts for municipalities. The data consists of deposit and lending rates of banks, housing credit institution's lending rates, housing credit institution's lending by collateral (all FMR) and municipalities and county councils loans in foreign currency (ESV).

To calculate the reference rate, quarterly, and for comparison purposes, Swedish market rates are used. The rates are:

STIBOR (Stockholm Interbank Offered Rate) 12-months duration, treasury bonds 5-years duration and the government borrowing rate (RGK).

### **9.3 Methods**

FISIM is only produced in sub-sectors 121 Central Bank, 122 Other monetary financial institutions. These two subsectors are denoted MFI, Monetary Financial Institutions. FISIM producers in sub-sector 122 are Banks 1221, Housing credit institutions 1223 and Other monetary credit market corporations 1224.

### **9.3.1 Domestic FISIM**

FISIM is calculated using method 1 as outlined in Council Regulation (EC) No 448/98 of 16 February 1998 and thus uses the following three components:

Average stocks of loans and deposits for MFI except central bank and 123 (Other financial intermediaries, except insurance corporations and pension funds, OFI).

Accrued interest for MFI except central bank and OFI by user sectors.

The internal reference rate which is given by the ratio of interest receivable on loans to the stocks of loans between MFI except central bank and OFI.

FISIM is calculated as:

$(\text{deposit stocks} \times \text{internal reference rate}) - \text{interest payable on deposits} +$   
 $\text{interest receivable on loans} - (\text{loan stocks} \times \text{internal reference rate})$

#### *9.3.1.1 Stock data*

For sub-sectors Banks and Housing credit institutions the Riksbank's monthly balance data of monetary financial institutions is used for data on stocks of loans and deposits by sector. An average of the opening and closing balance of each month in the quarter is used. The corresponding information for the sub-sector Other monetary credit market corporations is taken from the Swedish Financial Supervisory Authority's quarterly data. This information is also available by sector. An average of opening and closing balance is used.

#### *9.3.1.2 Interest*

Interest, payable and receivable, is calculated using the Riksbank's deposit and lending rates upon the stock data. Quarterly data from the Swedish Financial Supervisory Authority on the ratio interest income and expense to stocks of loans and deposits is calculated for comparison purposes. Final or chosen interest on loans and deposits for each FISIM producing sub-sector is often adjusted to match the information of the separate sources.

#### *9.3.1.3 The reference rate*

The reference rate is calculated using data from the Swedish Financial Supervisory Authority. Interest payments and liabilities are used. On a quarterly basis the data is compared with the rate of change of STIBOR with 12-months duration.

### **9.3.2 Import and export of FISIM**

The level of detail and quality of the components necessary for FISIM import and export calculations are not available in Sweden. The result of the external reference rate calculations, the ratio of interest received on loans from non-resident credit institutions plus interest paid on deposits to non-resident credit institutions to the corresponding stocks of loans, are very volatile and therefore not suitable for use. The volatileness

probably stems from the financial reports of the non-resident branches. The level of detail of these reports is different from the domestic one.

The Riksbank's Balance of Payment data on interest inflow and outflow by sector is used to calculate import and export of FISIM. The ratio of FISIM to accrued interest for each domestic sector is used to calculate inflow and outflow of FISIM. Only MFIs exports FISIM. FISIM between resident and non-resident MFIs are recorded net. Therefore only one third of the ratio of FISIM to accrued interest is used for this sector.

Municipalities and county councils' loans in foreign currency are used as a key to divide FISIM between the two sub-sectors of local government.

## **9.4 Allocating FISIM**

FISIM is allocated to industry, in accordance to Commission Regulation (EC) No 1889/2002 of 23 October 2002, using the stocks of loans and deposits on a single letter NACE level (A17). The full breakdown from A17 to industry level (about 134 industries) is made by use of the output of the respective industries as key.



**Table 97 FISIM-output and allocation by sector, 2005**

	<b>Mill SEK</b>
FISIM-output	66 835
FISIM produced in Sweden allocated to domestic units	57 310
- Non-financial corporations	19 814
- Financial corporations excl. insurance and pension	
- Insurance corporations and pension funds	1 479
- General government	1 209
- Households and NPISH	
- as consumers	17 607
- as owners of dwellings	9 834
- as un-incorporated enterprises	7 367
Export of FISIM	9 525
<b>Import of FISIM allocated to domestic units:</b>	5 071
- Non-financial corporations	3 507
- Financial corporations excl. insurance and pension	260
- Insurance corporations and pension funds	768
- General government	423
- Households and NPISH	
- as consumers	113
- as owners of dwellings	
- as un-incorporated enterprises and NPISH	
<b>Total use of FISIM</b>	71 906
- Non-financial corporations	23 321
- Financial corporations excl. insurance and pension	260
- Insurance corporations and pension funds	2 247
- General government	1 632
- Households	
- as consumers	17 720
- as owners of dwellings	9 834
- as un-incorporated enterprises and NPISH	7 367
Export of FISIM	9 525
<b>Total supply of FISIM</b>	71 906
Domestic production	66 835
Import	5 071
FISIM effect on GDP	23 806
FISIM effect on GNI	19 352

**Table 98 The exclusion of the effect of the allocation of FISIM on GNI, 2005**

	<b>ESA95codes</b>	<b>Mill SEK</b>
<b>Production approach</b>		
Output of goods and services (at basic prices)	P1	-2 261
Intermediate consumption (at purchasers' prices)	P2	21 545
Gross value added (at basic prices)	B1G	-23 806
Taxes on products	D21	
Subsidies on products	D31	
<b>Expenditure approach</b>		
Total final consumption expenditure	P3	-19 352
- Household final consumption expenditure	P3	-17 091
- NPISH final consumption expenditure	P3	-629
- General government final consumption expenditure	P3	-1 632
Gross capital formation	P5	
- Gross fixed capital formation	P51	
- Changes in inventories	P52	
- Acquisitions less disposals of valuables	P53	
Exports of goods and services	P6	-9 525
Imports of goods and services	P7	-5 071
<b>Income approach</b>		
Compensation of employees	D1	
Gross operating surplus and mixed income	B2G+B3G	-23 806
Taxes on production and imports	D2	
Subsidies	D3	
<b>Gross domestic product (ESA 95)</b>	<b>B1*G</b>	<b>-23 806</b>
Compensation of employees received from the rest of the world	D1	
Compensation of employees paid to the rest of the world	D1	
Taxes on production and imports paid to the Institutions of the EU	D2	
Subsidies received from the Institutions of the EU	D3	
Property income received from the rest of the world	D4	2 965
Property income paid to the rest of the world	D4	-1 489
<b>Gross national income (ESA 95)</b>	<b>B5*G</b>	<b>-19 352</b>

## Chapter 10 Main classifications used

The table below shows how production, investment, wages and salaries and employment are broken down by industry.

**Tabell 99 Production, investment, wages and salaries and employment broken down by industry**

NACE	SNI	Production, Employment, Wages and salaries	Investment	Description
A	01	0100	0100	Agriculture and services to agriculture
A	02	0200	0200	Forestry and services to forestry
B	05	0500	0500	Fishing
CA	10-12	1009	1009	Mining and quarrying of energy-producing materials
CB	13.1	1310	1310	Iron ore mining
CB	13.2	1320	1320	Other metal ore mining
CB	14	1400	1400	Other mining and quarrying
CA+CB	10-12,14			Mining and quarrying of energy-producing and other materials
CB	13			Mining of metal ores
C	10-14			Mining and quarrying
DA	15.1	1510		Slaughtering and processing of meat products
DA	15.2	1520		Fish processing
DA	15.3	1530		Fruit and vegetables
DA	15.4	1540		Manufacture of oils and fats
DA	15.5	1550		Dairies and ice-cream manufacture
DA	15.6	1560		Manufacture of grain mill products, starches and starch products
DA	15.7	1570		Manufacture of prepared animal feeds
DA	15.81	1581		Bakeries
DA	15.82	1582		Manufacture of crispbread and biscuits
DA	15.83	1583		Manufacture of sugar
DA	15.84	1584		Manufacture of chocolate and confectionery
DA	15.85-89	1589		Production of pasta, coffee/tea, mustard/ketchup, homogenised food preparations, other food products
DA	15.9	1590		Manufacture of beverages
DA	15		1500	Manufacture of food products and beverages
DA	16	1600	1600	Manufacture of tobacco products
DB	17.1-17.3	1719		Spinning and weaving of textiles, bleaching, dyeing etc.
DB	17.4-17.7	1749		Manufacture of textiles; knitted and crocheted fabrics and articles
DB	17		1700	Manufacture of textiles and textile products
DB	18	1800	1800	Manufacture of wearing apparel; preparation of furs
DC	19	1900	1900	Tanning and dressing of leather; manufacture of luggage, handbags, footwear and the like
DB+DC	18-19			Manufacture of wearing apparel; preparation of furs and tanning and dressing of leather; manufacture of luggage, handbags, footwear and the like
DB+DC	17-19			Manufacture of textiles and wearing apparel and production of leather and leather goods
DD	20.1	2010	2010	Sawmilling and planing of wood; impregnation of wood
DD	20.2	2020		Manufacture of veneers and wood-based panels and boards
DD	20.3	2030		Prefabricated house construction, builders' carpentry and joinery
DD	20.4	2040		Manufacture of wooden containers
DD	20.5	2050		Manufacture of other products of wood and manufacture of articles of cork, straw and plaiting materials

NACE	SNI	Production, Employment, Wages and salaries	Investment	Description
DD	202-205		2009	Manufacture of products of wood and manufacture of articles of cork, straw and plaiting materials
DD	20			Production of wood and wood products
DE	21.11	2111	2111	Manufacture of pulp
DE	21.12	2112	2112	Manufacture of paper and paperboard
DE	21.1			Manufacture of pulp, paper and paperboard
DE	21.2	2120	2120	Manufacture of articles of paper and paperboard
DE	21			Manufacture of pulp, paper and paper products
DE	22.1	2210		Publishing
DE	22.2-22.3	2229		Printing, reproduction of recorded media
DE	22		2200	Publishing; printing and other reproduction
DF	23	2300	2300	Manufacture of coal products, refined petroleum products and nuclear fuel
DG	24.1-24.2	2419		Manufacture of basic chemicals and pesticides
DG	24.1-24.3		2419+2430	Manufacture of basic chemical, pesticides, paints, varnishes and similar coating materials
DG	24.3	2430		Manufacture of paints, varnishes and similar coating materials
DG	24.4	2440	2440	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
DG	24.5	2450	2450	Manufacture of cleaning and toilet preparations
DG	24.4-24.5			Manufacture of pharmaceuticals, medicinal chemicals and botanical products, cleaning products and toilet preparations
DG	24.6-24.7	2469	2469	Manufacture of other chemical products
DG	24			Manufacture of chemicals and chemical products
DH	25.1	2510		Manufacture of rubber products
DH	25.2	2520		Manufacture of plastic products
DH	25		2500	Manufacture of rubber and plastic products
DI	26.1	2610		Manufacture of glass and glass products
DI	26.2-26.4	2629		Manufacture of ceramic products/baked-clay construction products
DI	26.5-26.6	2659		Manufacture of cement and concrete and cement products
DI	26.7-26.8	2679		Manufacture of stone goods and other non-metallic mineral products
DI	26		2600	Manufacture of other non-metallic mineral products
DJ	27.1	2710		Manufacture of basic iron and steel
DJ	27.2	2720		Manufacture of iron and steel tubes
DJ	27.3	2730		Other first processing of iron and steel; production of ferroalloys, non-ECSC products
DJ	27.1-27.3		2719	Manufacture of basic iron and steel and iron and steel tubes and other first processing of iron and steel
DJ	27.4-27.5	2749	2749	Manufacture of metals other than iron and casting of iron and other metals
DJ	27			Production of steel and other metals
DJ	28.1	2810		Manufacture of structural metal products
DJ	28.2-28.3	2829		Manufacture of tanks, reservoirs and containers, central heating boilers and radiators; steam generators
DJ	28.1-28.3, 28.6			Manufacture of structural metal products, containers, boilers and radiators, steam generators, cutlery, tools and other hardware products
DJ	284-285	2849		Forging, pressing, stamping and roll forming of metal; coating of metals
DJ	28.6	2860		Manufacture of cutlery, tools and other hardware products
DJ	28.7	2870		Other fabricated metal products

NACE	SNI	Production, Employment, Wages and salaries	Investment	Description
DJ	28.4-28.5, 28.7			Forging, pressing, stamping etc. of metal and other fabricated metal products
DJ	28		2800	Manufacture of fabricated metal products except machinery and equipment
DK	29.1	2910		Manufacture of machinery for the production and use of mechanical power, except engines
DK	29.2	2920		Manufacture of other general purpose machinery
DK	29.3	2930		Manufacture of agricultural and forestry machinery
DK	29.4	2940		Manufacture of machine-tools
DK	29.5	2950		Manufacture of other special purpose machinery
DK	29.6	2960		Manufacture of weapons and ammunition
DK	29.1-29.6			Manufacture of machinery and equipment n.e.c. except domestic appliances
DK	29.7	2970		Manufacture of domestic appliances n.e.c.
DK	29		2900	Manufacture of machinery and equipment n.e.c.
DL	30	3000	3000	Manufacture of office machinery and computers
DL	31.1	3110		Manufacture of electric motors, generators and transformers
DL	31.2	3120		Manufacture of electricity distribution and control apparatus
DL	31.3	3130		Manufacture of insulated wire and cable
DL	31.4	3140		Manufacture of accumulators and batteries
DL	31.5	3150		Manufacture of lighting equipment, electric lamps and lighting tubes
DL	31.6	3160		Manufacture of other electric equipment
DL	31.2-31.6			Manufacture of other electric equipment except electric motors, generators and transformers
DL	31		3100	Manufacture of other electrical machinery and apparatus
DL	32.1	3210		Manufacture of electronic components
DL	32.2	3220		Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
DL	32.3	3230		Manufacture of television and radio receivers, sound or video recording or reproducing apparatus
DL	322-323			Manufacture of television and radio transmitters and receivers, apparatus for line telephony and line telegraphy, sound or video recording or reproducing apparatus
DL	32		3200	Manufacture of telecommunications products
DL	33.1	3310		Manufacture of medical and surgical equipment and orthopaedic appliances
DL	33.2-33.3	3329		Manufacture of instruments and appliances for measuring, checking, testing and industrial process control
DL	331-333			Manufacture of medical and surgical equipment and orthopaedic appliances and appliances for measuring, monitoring and industrial process control
DL	33.4-33.5	3349		Manufacture of optical instruments, photographic equipment and watches and clocks
DL	33		3300	Manufacture of precision instruments, medical and optical instruments and watches and clocks
DM	34.1	3410		Manufacture of motor vehicles
DM	34.2	3420		Manufacture of bodies for motor vehicles; trailers and semi-trailers
DM	34.1-34.2			Manufacture of motor vehicles; manufacture of bodies for motor vehicles, trailers and semi-trailers
DM	34.3	3430		Manufacture of parts and accessories for motor vehicles and their engines
DM	34		3400	Manufacture of motor vehicles; trailers and semi-trailers
DM	35.1	3510		Building and repairing of ships and boats
DM	35.2	3520		Manufacture of railway and tramway locomotives and rolling stock

NACE	SNI	Production, Employment, Wages and salaries	Investment	Description
DM	35.3	3530		Manufacture of aircraft
DM	35.4-35.5	3549		Manufacture of motorcycles and bicycles; manufacture of other transport equipment
DM	35.2-35.5			Manufacture of railway and tramway locomotives and rolling stock and aircraft, manufacture of motorcycles and bicycles, manufacture of other transport equipment
DM	35		3500	Manufacture of other transport equipment
DN	36.1	3610		Manufacture of furniture
DN	36.2-36.3	3629		Manufacture of jewellery, gold and silver articles, musical instruments
DN	36.4-36.6	3649		Other manufacturing
DN	36		3600	Manufacture of furniture and other manufacturing
DN	37	3700	3700	Recycling
D	15-37			Manufacturing
E	40.1	4011	4011	Production of electricity
E	40.2	4020	4020	Manufacture of gas; distribution of gaseous fuels through mains
E	40.3	4013	4013	Steam and hot water supply
E	40			Production of electricity, gas and heat
E	41, 90.001	4100	4100	Collection, purification and distribution of water
F	45	4500	4500	Construction
G	50.2	5020		Maintenance and repair of motor vehicles
G	50-52 oth.	5009		Wholesale and retail trade; repair of household goods
G	50-52		5000	Wholesale and retail trade, repair of motor vehicles, personal and household goods
H	55	5500	5500	Hotels and restaurants
I	60.1	6010	6010	Transport via railways
I	60.21	6021	6021	Other scheduled passenger land transport
I	60.22	6022	6022	Taxi operation
I	60.23	6023	6023	Chartered bus services etc.
I	60.1-60.23			Other scheduled passenger land transport and chartered bus services etc.
I	60.24	6024	6024	Haulage
I	60.3	6030	6030	Transport via pipelines
I	60.24+60.3			Haulage and transport via pipelines
I	60.2+60.3			Other land transport and transport via pipelines
I	60			Land transport
I	61	6100	6100	Water transport
I	62	6200	6200	Air transport
I	63.1	6310	6310	Cargo handling and storage
I	63.21	6321	6321	Other supporting land transport activities
I	63.22	6322	6322	Port management and other supporting water transport activities
I	63.23	6323	6323	Airports and other supporting air transport activities
I	63.3	6330	6330	Activities of travel agencies and tour operators; tourist assistance activities
I	63.4	6340	6340	Forwarding, haulage contractors, ship brokers
I	63.3-63.4			Supporting land transport activities; activities of travel agencies and tour operators; tourist assistance activities and transport agents
I	63			Supporting and auxiliary transport activities; activities of tour operators and tourist assistance activities and transport agents
I	64.1	6410	6410	Post and courier activities
I	64.2	6420	6420	Telecommunications

NACE	SNI	Production, Employment, Wages and salaries	Investment	Description
I	64			Post and telecommunications activities
J	65	6500	6500	Banks and other credit institutions
J	66	6600	6600	Insurance
J	67	6700	6700	Activities auxiliary to financial intermediation
J	65-67			Credit institutions and insurance
K	70.2 part	7021	7021	Individual houses and holiday homes
K	70.2 part	7022	7022	Multiple-occupancy buildings
K	70.1, 3	7009	7009	Land developers, real estate agents, contract real estate management
K	part 702+ oth 70			Other real estate management and land developers, real estate agents and contract real estate management
K	70			Real estate and real estate management activities
K	71	7100	7100	Renting of machinery and equipment
K	72	7200	7200	Computer and related activities
K	73	7300	7300	Research and development (R&D)
K	74.1	7410		Legal and business consultancy, holdings
K	74.2-74.3	7429		Architectural and technical consultancy, testing and analysis
K	74.4	7440		Advertising and marketing agencies
K	74.5-74.8	7459		Labour recruitment and provision of personnel, security services, cleaning and waste disposal services, other business services
K	74			Other business activities
K	73-74		7400	Research and development institutions and other business activities
K	71-74			Renting of machinery and equipment, computer and related activities, research and development institutions and other business activities
L	75	7500	7500	Public administration and defence
M	80	8000	8000	Education
N	85.1	8510	8510	Human health activities
N	85.2	8520	8520	Veterinary activities
N	85.3	8530	8530	Social work activities
M+N	80-85			Education, human health activities, social services, veterinary activities
O	90 excl. 90001			Waste disposal, sanitation
O	91	9100	9100	Membership organisations and religious organisations
O	92	9200	9200	Recreational, cultural and sporting activities
O	93	9300	9300	Other service activities
O	90-93			Other community and personal services except sewage treatment works
P	95	9500	9500	Private households with employed persons
M,N,O, P	80-95			Education, human health activities, veterinary activities etc., other personal services, private households with employed persons
				Not classified
Q	99			International organisations, foreign embassies and the like (belonging to ROW)

Investment is also broken down, where applicable, among different types of asset in accordance with the table below.

**Tabell 100 Investment broken down, where applicable, among different types of asset**

Type of capital		Description
11		Livestock for breeding and dairy cattle
12		Trotting horses and draught animals
13		Protective dikes and ditches
14		Other forest management measures
22	A	Machinery
23		1-2 year investment
27	K	Machinery including cars
28		Machinery leasing
29		Other
31	A	Cars, tractors
311	A	Cars, goods vehicles, buses
312	A	Tractors, containers
32		Railway rolling stock
33		Ships and boats
331		Ships and boats including fishing vessels
332		Second-hand ships and boats
34		Off-shore
35		Aircraft
37	A	Motor car leasing
38		Other transport leasing
39		Other
41		New multiple-occupancy buildings
42		New individual houses
43		Reconstruction and extension of multiple-occupancy buildings
44		Reconstruction and extension of individual houses
49		Other
51		Roads
52		Drainage ditches
53		Holiday/weekend homes
54		Buildings financed by insurance
55		Historical buildings
59		Other buildings (industry)
61		Cost of change of ownership
62		Mineral exploration
63	K	Computer software
631	A	Computer software, purchased
632	A	Computer software, produced on own account
64		Artistic
A=year		For annual calculation only
K=quarter		For quarterly calculation only



In the system of product accounts products are broken down among the following groups:

**Tabell 101 Product groups (PG) in accordance with SNI 92 in ESA-adjusted product accounts**

National Accounts		
Product groups	SNI 92 product	
01111A	01.111.01+part 02	Wheat
01111B	del 01.111.06	Rye
01111C	01.111.05	Barley
01111D	del 01.111.06	Oats
01111E	del 01.111.02	Mixed grain
01111F	01.111.03-04+07-08	Other cereals
01111G		Energy crops
01111H		Planting seed
011130A	01.113.00	Potatoes for home consumption
0111300	01.113.00	Potatoes
0111401	01.114.	Sugar beet and sugar cane
0111A	01.111.09, 01.112.01	Feed crops
01119A	01.119.01-02	Legumes for feed
01119B	01.119.04-07	Oil plants
01119C	01.119.08	Raw tobacco
01119D	01.119.14	Planting seed (excl. cereals and potatoes)
01119E	01.119.03+(09-13)+15+01.115+117	Other agricultural plants
0112A	01.121.01-02, 01.123.01-02	Vegetables
0112B	01.121.03-04,01.122+124	Flowers/plants
0113A	01.131.01-07, 01.137	Fruit
0113B	01.131.08-10	Coffee and tea
0113C	01.131.11	Cacao beans
0113D	01.139.01	Spices
0113E	01.139.02	Wild berries
0121201	01.212.01	Cattle
0121202	01.212.02	Calves
0122A	01.221.01, 01.222.01	Sheep and goats
0122801	01.228.01	Horses including breeding horses
0123	01.23	Pigs
012410A	01.241.00	Eggs for home consumption
0124100	01.241.00	Eggs
0124A	01.242.+249	Poultry
0125100	01.251.00	Reindeer
01252	01.252	Animals reared for furs
01254	01.254	Pets
01259	01.259	Game
012A	01.211.00, 01.221.02,01.222.02	Milk
012B	del 01.2	Meat for home consumption
012C	del 01.2	Invest. livestock for breeding and dairy cattle
012D	01.221.03, 01.253,01.228.02,01.212.03	Other animal products (honey,etc)
012E		Milk for home consumption
014A	01.4	Services to agriculture

Product groups	SNI 92 product	
014S		Services to agriculture (public sector internal)
0150000	01.500.00	Hunting and game protection
0201101	02.011.01	Variations in quantity of timber cut
02011A	del 02.011.02-04	Pulpwood
02011B	del 02.011.02-04	Saw timber
0201105	02.011.05	Firewood
0201106	02.011.06	Other unprocessed wood
02012A	del 02.012.00	Forest drainage
0201A	del 02.012.00, 02.013.00	Forest management and logging
0201AS		Forest management and logging (publics sector internal)
0201B	02.014.00, 02.019exkl energy	Forest regen. mat. and other forestry prod.
0202	02.02	Services to forestry
050A	del 05	Fish, crustaceans etc.
050B	del 05	Services to fishing
10100	10.100	Hard coal
1020000	10.200.00	Lignite
1030	10.30	Peat
1110001	11.100.01	Crude oil
11100A	11.100.02-04	Natural gas
11200	11.200	Serv. to crude oil/natural gas extraction,incl. hire of drilling/dwelling platforms
1200000	12.000.00	Uran- and thorium ore
1310000	13.100.00	Iron ore
13200	13.200	Non-ferrous metal ores except uranium and thorium ores
141	14.1	Stone
142	14.2	Sand, gravel, rock and clay
14300	14.300	Chemical and mineral fertilisers
1440000	14.400.00	Salt
14500	14.500	Other products from ore and minerals
15111	15.111	Beef and veal; whole, half or quarter carcasses
15112	15.112	Beef and veal; small cuts
15120	15.120	Poultry meat, fresh and preserved
15130	15.130	Meat products
15200	15.200	Fish and fishery products, processed and preserved
15310	15.310	Potatoes, processed and preserved
1532000	15.32000	Fruit and berry juices and vegetable juices
15330	15.330	Miscellaneous fruit, berries and vegetables, processed/preserved
15410	15.410	Raw vegetable and animal oils and fats
15420	15.420	Refined vegetable and animal oils and fats
1543000	15.430.00	Margarines and similar preparations
1551100	15.511.00	Cheese and curds
1551201	15.512.01	Milk and cream <6% fat
1551202	15.512.02	Milk and cream >6% fat
1551206	15.512.06	Yoghurt
15512A	övr 15.512	Other dairy products
1552000	15.520.00	Ice-cream
15611	15.611	Flour
15612	15.612	Breakfast cereals, mixes and other grain-mill products
15620	15.620	Starches and starch products

Product groups	SNI 92 product	
15710	15.710	Prepared feeds, meal and pellets of alfalfa
1572000	15.720.00	Pet foods
15810	15.810	Bread and fresh bakery products
1582	15.82	Crispbread, biscuits and preserved bakery products
15830	15.83	Sugar
1584	15.84	Cocoa, chocolate and confectionery
15850	15.850	Pasta products
15860A	15.860.01-02+06	Coffee
15860B	15.860.03-05	Tea
15870	15.870	Mustard, ketchup, spices and other condiments
158A	15.880-890	Other foods, including homogenised preparations
1591000	15.910.00	Distilled alcoholic beverages
15920	15.920	Ethyl alcohol (crude spirit)
159A	15.930-950	Wine, cider and other non-distilled fermented beverages
15960	15.960	Beer
1597000	15.970.00	Malt
15980	15.980	Mineral water and soft drinks
16000	16.000	Tobacco products
171	17.1	Yarn
172	17.2	Woven fabrics of textile and glass fibre
17300	17.300	Bleaching, dyeing, textile printing plants and other textile processing plants
174	17.4	Sewn textile products except wearing apparel
175	17.5	Other textiles
17600	17.600	Elastic webbing
177	17.7	Knitted goods
17X		Second-hand clothing and textile waste
1810000	18.100.00	Leather garments
182	18.2	Other clothing and accessories
18300	18.300	Furs; fur products
19100	19.100	Leather
19200	19.200	Luggage, handbags, saddle goods
19300	19.300	Footwear
20101	20.101	Wood, sawn
20102	20.102	Wood, planed
20103	20.103	Unprocessed wood; impregnated or otherwise treated
20201	20.201	Veneer, plywood and laminated board
2020200	20.202.00	Particle board
20203	20.203	Fibre board
2030100	20.301.00	Prefabricated timber houses
20302	20.302	Building joinery and interior fittings
20400	20.400	Wooden containers
20510	20.510	Other wood products
20520	20.520	Articles of cork, straw, plaiting materials and the like
2111100	21.111.00	Mechanical or semi-chemical wood pulp
21112	21.112	Sulphate pulp
2111300	21.113.00	Sulphite pulp
2112100	21.121.00	Newsprint
21122	21.122	Other printing paper

Product groups	SNI 92 product	
21123	21.123	Kraft paper and kraft liner board
21129	21.129	Other paper and board
2121100	21.211.00	Corrugated board and corrugated board packaging
21219	21.219	Paper and board packaging except corrugated board
21220	21.220	Household and sanitary goods of paper
21230	21.230	Writing paper, envelopes and the like
21240	21.240	Wallpaper
21250	21.250	Miscellaneous paper or board products
221	22.1	Products from publishing activity
222	22.2	Printing products
223	22.3	Reproduction of recorded media
2310001	23.100.01	Coke
2310002	23.100.02	Mineral tars
23200A	del 23.200.01	Motor gasoline
23200B	23.200.03+del 04+06	Light oils, kerosene (excluding aviation), other medium oils
23200C	23.200.02+del 01+del 04	Aviation and jet gasoline, aviation kerosene
23200D	del 23.200.04+del 05	Diesel oil, motor kerosene
23200E	del 23.200.05	Domestic fuel oil
2320007	23.200.07	Heavy fuel oils
2320008	23.200.08	Lubricants
2320009	23.200.09	Propane and butane
2320010	23.200.10	Ethylene, propylene, butylene etc.
23200F	23.200.11-12	Petroleum coke, petroleum bitumen etc.
23300	23.300	Nuclear fuel
24110	24.110	Industrial gases
24120	24.120	Dyes and pigments
24130	24.130	Other inorganic basic chemicals
2414A	24.140.25-26+28	Tall oil, charcoal, liquors from the manufacture of wood pulp
2414B	övr 24.140	Other organic basic chemicals
24150	24.150	Fertilisers and nitrogen products
24160	24.160	Basic plastics
2417000	24.170.00	Synthetic basic rubber
24200	24.200	Pesticides and other agricultural chemicals
24300	24.300	Paints, varnishes, printing inks etc.
24410	24.410	Basic pharmaceuticals
24420	24.420	Medicines
24510	24.510	Soaps, detergents and polishing preparations
24520	24.520	Perfumes and toilet preparations
246	24.6	Other chemical products
24700	24.700	Man-made fibres
251A	25.110-120	New and retreated tyres and tubes
25130	25.130	Other rubber products
252	25.2	Plastic products
26110	26.110	Flat glass
26120	26.120	Shaped and processed flat glass
26131	26.131	Bottles and glass containers
26132	26.132	Household and ornamental glass
26140	26.140	Glass fibre
26150	26.150	Other glass products including technical glassware

Product groups	SNI 92 product	
262	26.2	Ceramic products except non-fire-resistant for construction purposes
2630000	26.300.00	Ceramic floor and wall tiles
26400	26.400	Bricks, tiles and other construction products, in baked clay
265	26.5	Cement, lime and plaster
266	26.6	Concrete, cement and plaster products
2670	26.70	Stone goods
268	26.8	Other non-metal mineral products
27100	27.100	Iron and steel and ferroalloys
27100X		Scrap iron
272	27.2	Iron and steel tubes
273	27.3	Other primary products of iron and steel and ferroalloys
274	27.4	Non-ferrous metals
274X		Non-ferrous metal scrap
275	27.5	Iron and non-ferrous metal castings
281	28.1	Structural metal products
28210	28.210	Cisterns, tanks, reservoirs and other containers of metal
28220	28.220	Central heating radiators and boilers
28300	28.300	Steam generators except central heating boilers
28400	28.400	Forging, pressing, stamping/roll forming of metal;not for the purpose of manufacture
285	28.5	Coating and plating of metal, contract metal work
286	28.6	Cutlery, tools and other hardware products
287	28.7	Other metal products
291	29.1	Machinery for the production and use of mechanical power, except aircraft/vehicles
292	29.2	Other general purpose machinery
293	29.3	Agricultural and forestry machinery
2940	29.40	Machine-tools
29510	29.510	Machinery for metallurgy
29520	29.520	Machinery for mining, quarrying and construction
29530	29.530	Machinery for food, beverage and tobacco processing
29540	29.540	Machinery for textile, apparel and leather production
29550	29.550	Machinery for pulp, paper and paperboard production
29561	29.561	Plastic and rubber processing machinery
29569	29.569	Miscellaneous other special machinery
29600	29.600	Weapons and ammunition
29711	29.711	Refrigerators and freezers, washing machines and other white goods
29719	29.719	Other domestic electric appliances
29720	29.720	Non-electric domestic appliances
30010	30.010	Office machinery and parts for such machinery
30020	30.020	Computers and other data processing equipment
31100	31.100	Electric motors, generators and transformers
31200	31.200	Electricity distribution and control apparatus
31300	31.300	Insulated wire and cable
31400	31.400	Batteries and accumulators
3150	31.50	Lighting equipment, electric lamps and lighting tubes
316	31.6	Other electrical equipment
32100	32.100	Electronic components
32200	32.200	Television and radio transmitters, apparatus for line telephony and line telegraphy

Product groups	SNI 92 product	
32300	32.300	Television and radio receivers, sound or video recording apparatus
33101	33.101	Medical equipment
3310200	33.102.00	Dentures
33200	33.200	Instruments and appliances for measuring, checking, testing
3330000	33.300.00	Instruments for industrial process control
33400	33.400	Optical instruments and photographic equipment
33500	33.500	Watches and clocks
34100	34.100	Motor vehicles
34100X		Used cars
34200	34.200	Bodies for motor vehicles; trailers, semi-trailers
34300	34.300	Parts and accessories for motor vehicles and engines
35110	35.110	Ships and boats
35110X		Used ships
35120	35.120	Pleasure boats
35200	35.200	Railway locomotives and rolling stock
35300	35.300	Aircraft and spacecraft
35410	35.410	Motorcycles
35420	35.420	Bicycles
35430	35.430	Invalid carriages
3550000	35.500.00	Other transport equipment
361	36.1	Furniture
362	36.2	Jewellery, gold and silver articles
36300	36.300	Musical instruments
36400	36.400	Sports goods
36500	36.500	Games and toys
366	36.6	Miscellaneous goods
3710000	37.100.00	Recycling of metal waste and scrap
3720000	37.200.00	Recycling of non-metal waste and scrap
37200X		Wastes
4010002	40.100.02	Used fuel elements in nuclear reactors
40100A	40.100.01+03	Electricity and distribution of electricity
40200	40.200	Manuf. gas and distribution of gaseous fuels through mains
4030000	40.300.00	Steam and hot water supply, incl cold water/ice for cooling
41000	41.000 + 90.001.01	Supply of water including sewerage
45	45	Construction
50A	50.20+ 50.400.04	Repair of motor vehicles incl. motorcycles
527	52.7	Rep household/personal articles
5A		Commissions generated by resident activities incl. merchanting 93-99
5AA		Commissions
5AB		Merchanting
5B		Commissions, imports
5C		Trade m+C324argins
551	55.1	Hotel services
552	55.2	Camping and other accommodation services
55A	55.3-4	Restaurant and bar services
555	55.5	Canteen, catering and central kitchen services
60100A	del 60.100.01-02	Passenger transport by railway
60100B	del 60.100.01-02	Passenger transport by railway: contract

Product groups	SNI 92 product	
60100C	60.100.03-10	Goods/ore transport
6021A	del 60.21	Passenger transport (public transport)
6021B	del 60.21	Goods transport (public transport)
60220	60.220	Taxi transport
60230	60.230	Passenger transport, bus
60240	60.240	Road transport, goods
60300	60.300	Transport via pipelines
61A	61.101.01,,102.01,,200.01-02	Passenger transport, boat/ship
61B	61.101.02-05,,102.02-07,,200.03-07	Goods transport, boat/ship
61C	61.102.08-09,,200.08-09	Hire of ships and boats
62A	62.100.01, .200.01	Passenger transport, air
62B	62.100.02-04, .200.02	Goods transport, air
62C	62.200.03	Hire of aircraft
62300	62.300	Space transport
63110	63.110	Cargo handling
63120	63.120	Storage and warehousing
63210A	63.210.05	Parking services
63210B	63.210.03-04	Toll road and bridge services
63210C	63.210.01-02+.05-06	Other supporting land transport activities
6321OPEA		Pub. prod. for own fin. cons. Supp. land transport act.
63220A	63.220.01	Port services
63220B	63.220.02-04	Pilotage and other navigation services
63220C	63.220.05-06	Other supporting sea transport activities
63230	63.230	Other supporting air transport activities
63301	63.301	Package tours by air and bus, domestic and foreign
6330A	63.302-303	Other travel organising and tourist assistance activities
633OPEA		Pub. prod. for own fin. cons. Travel agencies
63400	63.400	Other transport agency services
641	64.1	Post and courier activities
64201A	64.201.01-11	Telecommunications services excluding mobile telephony
64201B	64201.12	Mobile telephony
64202	64.202.01-02	Broadcasting services, television and radio transmission
64203	64.203	Cable services, television and radio services
65B	65.	Banking services & other financial intermediation
65A		FISIM
6601	66.01	Life insurance
66020	66.020	Pension fund services
66030A	del 66.030	Non-life insurance
66030B	del 66.030	Reinsurance
67	67	Activities auxiliary to financial intermediation
70201A	del 70.201.00	Imputed rentals for owner-occupiers
70201B	del 70.201.00	Imputed rentals for secondary residences
70201C	del 70.201.00	Actual rentals paid by tenants
7020A	del 70.202-209	Other real estate letting
7020L	del 70.202-209	Other real estate letting (public sector internal)
7020PK	del 70.202-209	Other real estate letting (public sector internal)
7020S	del 70.202-209	Other real estate letting (public sector internal)
70A	70.1 + 70.3	Real estate management etc.
71100	71.100.00	Motor vehicle hire (cars and vans)

Product groups	SNI 92 product	
71100A		Car benefits
71210	71.210	Hire of other land transport equipment without driver
71220	71.220	Hire of ships and boats without master
71230	71.230	Hire of aircraft without crew
713	71.3	Hire of machinery and equipment
7140	71.40	Hire household articles/goods for personal use
7220	72.20	Computer system and software consultancy
7220EG	72.20	Computer systems/software produced on own account
72500	72.500	Maintenance and repair of office and accounting machinery
72A	72.1+3+4+6	Other data processing services
73	73	Research and development
73S		Research and development (public sector internal)
73OPEA		Pub. prod. for own fin. cons. R&D
741	74.1	Legal and business consultancy
741A		Licence, patent and royalty services
741S		Legal and business consultancy (public sector internal)
742	74.2	Architectural and technical consultancy
742A		Construction services abroad
742S		Architectural and technical consultancy (public sector internal)
743	74.3	Technical testing and analysis
743S		Technical testing and analysis (public sector internal)
744	74.4	Advertising services
745	74.5	Labour recruitment and provision of personnel
746	74.6	Investigation and security activities
746S		Investigation and security activities (public sector internal)
747	74.7	Cleaning and chimney-sweeping
748	74.8	Other business services
75A	75.11, 75.21	General public service activities
75B	75.1 exkl 75.11	Other public administration
75BPK		Other public administration (public sector internal)
75BS		Other public administration (public sector internal)
75C	75.2 exkl 75.21	Defence, law enforcement and fire protection
75CS		Defence, law enforcement and fire protection (public sector internal)
75OPEA		Pub. prod. for own fin. cons. Public administration
801	80.1	Primary education
802	80.2	Secondary education
803	80.3	Higher education
803S		Higher education (public sector internal)
804	80.4	Adult and other education
804S		Adult and other education (public sector internal)
80OPEA		Pub. prod. for own fin. cons. Education.
85A		Health & social services (pub.sector internal) Municipalities' sales to county councils
85B		Health & social services (pub.sector internal) County councils' sales to municipalities
851A	85.110 + del 85.120	Hospital activities
851B	del 85.120	Medical practice activities
85130	85.130	Dental practice activities
85140	85.140	Other human health activities
85140S		Other human health activities (public sector internal)



Product groups	SNI 92 product	
<b>851OPEA</b>		Pub. prod. for own fin. cons. Human health activities.
<b>85200</b>	85.200	Veterinary activities
<b>853A</b>		Child care
<b>853B</b>		Care of the elderly and disabled
<b>853C</b>		Pers. assistant
<b>853D</b>		Individual and family welfare
<b>853OPEA</b>		Pub. prod. for own fin. cons. Care and social services.
<b>90</b>	90 ej 90.001.01	Sewage and refuse disp.
<b>911</b>	91.1	Business, employers' and professional org.
<b>912</b>	91.2	Activities of trade unions
<b>9131000</b>	91.310.00	Activities of religious organizations
<b>913A</b>	91.320-330	Activities of political organizations and other organizations n.e.c.
<b>91HPEA</b>		NPISH prod. for own fin. cons. Organisations and religious activities.
<b>91OPEA</b>		Pub. prod. for own fin. cons. Business employers' and professional organisations
<b>921</b>	92.1	Motion picture and video activities
<b>922</b>	92.2	Radio and television activities
<b>9231</b>	92.31	Artistic and literary creation and interpretation
<b>923A</b>	rest 92.3	Theatre, entertain.
<b>924</b>	92.4	News agency activities
<b>925</b>	92.5	Library, archive and museum activities
<b>925S</b>		Sporting activities
<b>926</b>	92.6	Sporting activities
<b>92B</b>		Originals
<b>9271</b>	92.71	Gambling and betting activities
<b>9272</b>	92.72	Other recreational activities
<b>92OPEA</b>		Pub. prod. for own fin. cons. Culture
<b>9301</b>	93.01	Laundering and dry-cleaning activities
<b>9302</b>	93.02	Hairdressing and other beauty treatment
<b>9303</b>	93.03	Funeral and related activities
<b>9304</b>	93.04	Physical well-being activities
<b>9305</b>	93.05	Other service activities
<b>9500000</b>	95.000.00	Private households with employed persons
<b>9900000</b>	99.000.00	Extra-territorial organizations and bodies
<b>Supply and use not distributed by product group</b>		
<b>99901</b>		Consumption by Swedes abroad
<b>99902</b>		Foreign consumption in Sweden

**Tabell 102 COFOG classification with associated industries**

	NACE/SNI	
COFOG	Industry	Description
01		<b>GENERAL PUBLIC SERVICES</b>
0111	75	Executive and legislative organs
0112	75	Financial and fiscal affairs
0113	75	External affairs
0119	75	Foreign economic aid
0121	75	Economic aid to developing countries and countries in transition
0122	75	Economic aid routed through international organisations
0129	75	Not specified 012
0131	75	General personnel services
0132	75	Overall planning and statistical services
0133	75	Other general services
0139	75	Not specified 013
0140	73	Basic research
0150	73	R&D General public services
0160	75	General public services n.e.c.
0170	75	Public debt transactions
0180	75	Transfers of a gen. character betw. diff. levels of government
02		<b>DEFENCE</b>
0210	75	Military defence
0220	75	Civil defence
0230	75	Foreign military aid
0240	73	R&D Defence
0250	75	Defence n.e.c.
03		<b>PUBLIC ORDER AND SAFETY</b>
0310	75	Police services
0320	75	Fire-protection services
0330	75	Law courts
0340	75	Prisons
0350	73	R&D Public order and safety
0360	75	Public order and safety n.e.c.
04		<b>ECONOMIC AFFAIRS</b>
0411	75	General economic and commercial affairs
0412	75	General labour affairs
0419	75	Not specified 041
0421	75	Agriculture
0422	75	Forestry
0423	75	Fishing and hunting
0429	75	Not specified 042
0431	75	Coal and other solid mineral fuels

COFOG	Industry	Description
0432	75	Petroleum and natural gas
0433	75	Nuclear fuel
0434	75	Other fuels
0435	75	Electricity
04352	40.1,40.3	Government owned electricity corporations
0436	75	Non-electrical energy
04362	40.2	Government owned gasworks corporations
0439	75	Not specified 043
0441	75	Mining of mineral resources other than mineral fuels
0442	75	Manufacturing
0443	75	Construction
04432	45	AV Bygg
0449	75	Not specified 044
0451	63.21	Road transport
04512	60.21	Government owned public transport corporations
04513	63.1	Government owned storage magazines corporations
0452	75	Water transport
04522	61	Government owned shipping corporations
04523	63.22	Government owned water support corporations
0453	75	Railway transport
0454	75	Air transport
04542	63.23	Government owned airports
0455	75	Pipeline and other transport
0459	75	Not specified 045
0460	75	Communication
0471	75	Distributive trades, storage and warehousing
04712	50-52	Government owned wholesale and retail trade
0472	75	Hotels and restaurants
0473	63.3	Tourism
0474	75	Multipurpose development projects
0479	75	Not specified 047
0481	73	R&D General economic, commercial and labour affairs
0482	73	R&D Agriculture, forestry, fishing and hunting
0483	73	R&D Fuel and energy
0484	73	R&D Mining, manufacturing and construction
0485	73	R&D Transport
04851	73	R&D Transport
04852	63.21	Other R&D Transports
0486	73	R&D Communication
0487	73	R&D Other industries
0489	73	Not specified 048
0490	75	Economic affairs n.e.c.
0492	66	Government owned insurance corporations
0493	74.1	Government owned legal/economic corporations

COFOG	Industry	Description
0494	70.1,70.3	Government owned real estate corporations
05		<b>ENVIRONMENT PROTECTION</b>
0510	75	Waste management
0512	90 ex 90.0001	Government owned waste corporations
0520	75	Waste water management
0530	75	Pollution abatement
0540	75	Protection of biodiversity and landscape
0550	73	R&D Environment protection
0560	75	Environment protection n.e.c.
06		<b>HOUSING AND COMMUNITY AMENITIES</b>
0610	75	Housing development
0612	70.2 del	Government owned multi dwelling corporations
0620	75	Community development
0630	75	Water supply
0632	41, 90.0001	Government owned water/sewage corporations
0640	75	Street lighting
0650	73	R&D Housing and community amenities
0651	73	R&D Housing and community amenities
0652	75	Other R&D Housing and community amenities
0660	75	Housing and community amenities n.e.c.
07		<b>HEALTH</b>
0711	85.1	Pharmaceutical products
07111	85.1	Pharmaceutical products
07112	75	Administration pharmaceutical products
0712	85.1	Other medical products
0713	85.1	Therapeutical appliances and equipment
0719	85.1	Not specified 071
0721	85.1	General medical services
0722	85.1	Specialised medical services
0723	85.1	Dental services
0724	85.1	Paramedical services
0729	85.1	Not specified 072
0731	85.1	General hospital services
0732	85.1	Specialised hospital services
07321	85.1	Specialised hospital services
07322	75	Administration specialised hospital services
0733	85.1	Medical and maternity centre services
0734	85.1	Nursing and convalescent home services
0739	85.1	Not specified 073
0740	85.1	Public health services
0741	85.1	Public health services
0742	75	Administration, public health services
0750	73	R&D Health
0751	73	R&D Health

COFOG	Industry	Description
0752	75	Administration R&D Health
0760	85.1	Health n.e.c.
0761	85.1	Health n.e.c.
0762	75	Administration health n.e.c.
08		<b>RECREATION, CULTURE AND RELIGION</b>
0810	92	Recreational and sporting services
0820	92	Cultural services
0830	92	Broadcasting and publishing services
0840	91	Religious and other community services
0850	73	R&D Recreation, culture and religion
0851	73	R&D Recreation, culture and religion
0852	75	Other R&D Recreation, culture and religion
0860	92	Recreation, culture and religion n.e.c.
09		<b>EDUCATION</b>
0911	80	Pre-primary education
09121	80	Primary education
09122	80	Compulsory school for children with special needs
09123	80	Basic education for adults
0919	80	Not specified 091
09221	80	Secondary education, general programmes
09222	80	Secondary education for children with special needs
09223	80	Secondary education, adults
0929	80	Not specified 092
0930	80	Post-secondary non-tertiary education
0941	80	First stage of tertiary education
0942	80	Second stage of tertiary education
0949	80	Not specified 094
0950	80	Education not definable by level
0960	80	Subsidiary services to education
0970	73	R&D Education
0980	80	Education n.e.c.
0981	80	Education n.e.c.
0982	75	Administration education n.e.c.
10		<b>SOCIAL PROTECTION</b>
1011	85.3	Sickness
1012	85.3	Disability
1019	85.3	Not specified 101
1020	85.3	Old age
1021	85.3	Old age
1022	75	Administration, old age
1030	85.3	Survivors
1041	85.3	Child care
1042	85.3	Twenty four hour care

COFOG	Industry	Description
1043	85.3	Open child/youth care
1044	85.3	Child care after school
1049	85.3	Not specified 104
1050	75	Unemployment
1060	85.3	Housing
1071	85.3	Care for adults and refugees
1072	85.3	Care for adult abusers
1073	85.3	Other individual and family care
1078	75	Legal aid
1079	85.3	Not specified miscellaneous social protection
1080	73	R&D Social protection
1081	73	R&D Social protection
1082	75	Övr FoU Social protection
1090	85.3	Social protection n.e.c.
1091	85.3	Social protection n.e.c.
1092	75	Administration social protection n.e.c.

**Tabell 103 Household consumption broken down by COICOP purpose**

01	Food and non-alcoholic beverages
011	Food
0111	Bread and cereals
0112	Meat
0113	Fish
0114	Milk, cheese and eggs
0115	Oils and fats
0116	Fruit
0117	Vegetables
0118	Sweets, ice-cream, jams, marmalades and confectionery
0119	Salt, spices, sauces and homogenised baby food
012	Non-alcoholic beverages
0121	Coffee, tea and drinking chocolate
0122	Soft drinks, fruit and vegetable juices and mineral waters
02	Alcoholic beverages, tobacco
0211	Spirits
0212	Wine
0213	Beer
022	Tobacco
022	Narcotics
03	Clothing and footwear
031	Clothing etc.
0311	Clothing materials
0312	Garments
0313	Clothing accessories, sewing requisites and yarn
0314	Mending, hire and dry-cleaning/laundry of clothing
032	Footwear including repair and hire of footwear
0321	Shoes
0322	Repair and hire of footwear
04	Housing
041	Rentals in multiple-occupancy buildings, unheated rental
0411	Actual rentals paid by tenants, unheated rental
0412	Tenant-ownership right, utility value (unheated rental)
042	Individual house and holiday home, utility value (unheated rental)
0421	Individual house, utility value (unheated rental)
0422	Holiday home, utility value (unheated rental)
043	Materials and services for the upkeep of the dwelling
0431	Materials for the maintenance and repair of the dwelling
0432	Services for the maintenance and repair of the dwelling
045	Electricity, gas and other fuels
0451	Electricity
0452	Gas
0453	Liquid fuels; oil, kerosene and LPG
0454	Solid fuels; wood, coal, pellets and woodchips
0455	District heating
05	Furniture, furnishings, household equipment and non-durable household goods
051	Furniture, carpets and furnishings
0511	Furniture, fittings, furnishings and pictures
0512	Carpets, including fitted floor coverings
0513	Furniture repairs
052	Household textiles
053	Household appliances

0531	Major household appliances as additional equipment
0532	Smaller household electric appliances
0533	Repair of household appliances
054	Glassware, tableware and household utensils
055	Tools and equipment for house and garden
0551	Major motorised tools and equipment
0552	Hand tools, garden tools, fittings, batteries and lamps
056	Household goods and services
0561	Non-durable household goods and cleaning products
0562	Domestic and household services; household cleaning, dry-cleaning, laundering and hire of household furnishings
06	Health and medical care
061	Medicinal and pharmaceutical preparations and medical products
0611	Medicines and vitamins
0612	Other medical products
0613	Spectacles, lenses, etc
062	Medical treatment, patient charges for services of medical and dental practitioners, medically prescribed gymnastic therapy etc.
0621	Out-patient medical services, patient charges
0622	Dental treatment, patient charges
0623	Gymnastic therapy, chiropractors, physiotherapists, etc.; patient charges
063	Hospital services, patient charges
0630	Hospital services, patient charges
07	Transport and vehicles
071	Vehicles
0711	Cars
0712	Motorcycles, scooters, mopeds and motocross
0713	Bicycles
0714	Animal-drawn vehicles
072	Operating costs for personal transport equipment
0721	Spare parts and accessories
0722	Fuels and lubricants; petrol, diesel, oil, glycol and mentholated spirit
0723	Maintenance and repair
0724	Other vehicle services; parking, driving licence and concessionary car
073	Transport services
0731	Railway transport
0732	Road transport; taxi and long-distance bus transport
0733	Air transport
0734	Sea transport
0735	Combined passenger transport
0736	Other transport services; removals
08	Postal services and telecommunications
081	Postal services and telecommunications
0811	Postal services
0812	Telecommunications equipment
0813	Telecommunications services; fixed, mobile and internet
09	Recreation and culture, goods and services
091	Audio-visual, photographic and information processing equipment
0911	Equipment for the reception, recording and reproduction of sound and pictures; television, radio etc.
0912	Cameras, other photographic equipment and optical instruments
0913	IT equipment; PCs, printers, accessories and calculators, typewriters.
0914	Film, CDs, cassettes; pre-recorded and unrecorded
0915	Repair of audiovisual, photographic and IT equipment
092	Major durables for recreation and culture; caravans, boats, musical instruments and



	sporting equipment
0921	Major durables for recreation and culture; caravans, boats and sporting equipment
0922	Musical instruments and equipment for indoor activities
0923	Repair and maintenance of major durables for recreation
093	Other recreational goods, plants, flowers, pets, pet food and equipment for animals
0931	Toys, games, Christmas decorations, fireworks and accessories and hobby items
0932	Sports, fishing and camping equipment etc.
0933	Flowers, garden plants, Christmas trees, soils, fertilisers and pots
0934	Pets, pet food and equipment for animals
0935	Veterinary and other services for animals; animal boarding etc
094	Recreational and cultural services
0941	Sporting and recreational services; hire of equipment, participants' fees
0942	Cultural services; cinemas, museums, television licences, photography and film processing
0943	Gaming; net amount of stake less winnings paid out
095	Newspapers, books and stationery
0951	Books incl. textbooks, excl. stamp albums
0952	Newspapers and magazines
0953	Other printed matter
0954	Stationery
096	Package holidays
10	Education, out-of-school charges
101	Education, out-of-school charges
1011	Pre-primary education and out-of-school charges
1014	Higher education examinations
11	Restaurants, cafés, hotels and other overnight accommodation
111	Restaurants, cafés, other catering services, kiosks and vending machines
112	Hotels and other overnight accommodation
12	Miscellaneous goods and services
121	Personal care
1211	Hairdressing and personal grooming
1212	Electric appliances for personal care
1213	Other products for personal grooming and beauty care
122	Sexual services
123	Personal articles
1231	Jewellery, clocks and watches incl. repairs
1232	Other personal effects, such as bags, baby carriages, baby chairs and miscellaneous accessories
124	Social protection services for children, the elderly and disabled
1240	Social protection services for children, the elderly and disabled
125	Insurance services
1251	Life insurance
1252	Home insurance
1253	Health insurance
1254	Motor insurance
1255	Other insurance
126	Financial services
1262	Other financial services; e.g. bank and postal charges
127	Miscellaneous other services; funeral services, payment for certificates and services
1270	Miscellaneous other services; funeral services, payment for certificates and services
15	Consumption of Swedes abroad, not classified
16	Consumption of foreign visitors in Sweden, not classified
	Non-profit institutions serving households
	Total consumption expenditure

## Chapter 11 Main data sources used

Statistics Sweden's Business database (Företagsdatabasen, FDB)

The VAT Register (2002) - Administrative data

### **11.1 Statistical surveys and other data sources used for the production approach:**

Structural Business Statistics (2005)

Sector calculations for agriculture (2005)

Statistics on operations in large-scale and small-scale forestry (2004)

Felling volumes in forestry and woodmeasurement (2007)

National Forest Survey (2001-2005)

Fishing statistics (2004-2005)

Sea fishing catches (2005)

Industrial goods production (2005)

Annual energy statistics for electricity, gas and district heating (2005)

Financial corporations except insurance companies

- Financial enterprises, annual financial data (2005)

- Financial institutions, assets and liabilities (2005)

Insurance companies, annual financial data (2005)

Riksbank's (Sweden's central bank's) Financial Market Statistics (2003)

### **11.2 Statistical surveys and other data sources used for the income approach:**

Total payroll statistics based on the income statement register (2005)

Descriptions of various statistical inquiries relating to persons employed:

- The Labour Force Survey (2007)

- Short-term employment statistics (2005)

- Register-based labour market statistics (2005)

- Structural Business Statistics (2005)

### **11.3 Statistical surveys and other data sources used for the expenditure approach:**

Turnover statistics - Trade in goods and services (2005)

Household budget survey, HBS (2003-2005)

Food sales (2005)

Retail trade – sales by product (2002)

Income and cost inquiry for multiple-occupancy buildings, IKU (2005)

Survey of rents for dwellings, BiH (2005)

Household's finances, HEK (2005)

Total activity of central government

Summary of municipal accounts

Summary accounts of county councils

Economic report on church districts

Summary accounts of municipal associations

International trade statistics in goods (2000)

External trade in services (2007)

The income and costs of the SAS consortia

Statistical register for vehicles (2005)

Investment survey (2006)

Sources for the inventory calculations

**11.4 Statistical surveys and other data sources used for the transition from GDP to GNI**

Foreign Direct Investments – assets and income (2006)

Balance statistics for non-financial companies, including statistics for the balance of payment (2006)

## **Statistics Sweden's Business database (Företagsdatabasen, FDB)**

**Previously Central register of enterprises and establishments (*Centrala företags- och arbetsställeregistret*, CFAR)**

### **Purpose and history**

By decision of Parliament in 1963 Statistics Sweden was instructed to maintain a central business register (CFR). The register was gradually expanded until, by the beginning of the 1980s, it was fairly comprehensive, even as regards the establishments<sup>1)</sup> of enterprises. It was then called the Central register of enterprises and establishments (*Centrala företags- och arbetsställeregistret*, CFAR). Under the Ordinance on the general business register (SFS 1984:692) facilities for maintaining the register were substantially improved by the granting of authority to make use of a number of other administrative registers.

After Sweden became a member of the European Community (EU) there was a process of adaptation to EU regulations on economic statistics and business registers for statistical purposes. The content of the register was thus also expanded to include several new types of units. The register was renamed again in order to take account of this additional content, and is now called Statistics Sweden's business register. The abbreviation FDB stands for "*FöretagsDataBasen*" (Business database).

The FDB provides the sampling frame for statistics produced by Statistics Sweden. This applies in particular to economic statistics. All statistics intended to provide information on the Swedish economy, regardless of level, call for coordination of definitions of units to be surveyed, industries, size categories etc. This in turn requires a register of high quality to serve as an instrument of coordination. The register covers all Swedish enterprises, departments and agencies of government, organisations, their establishments and activity units. With the aid of the FDB, populations are demarcated for statistical inquiries as regards coverage, industries and size groups. The register serves as a source for name and address data for the enterprises, establishments and/or activity units to be covered by various inquiries. The FDB is one of the basic registers in the register-based system and also includes the previously separate Consolidated group register (*Koncernregistret*).

<sup>1)</sup> The term establishment denotes a geographically delimited location at which an enterprise pursues an activity. For a more exhaustive definition and description, see below.

### **Users and areas of use**

The FDB is a cornerstone of Statistics Sweden's economic statistics, but is also used as a sampling frame for statistical inquiries in other areas conducted within and outside Statistics Sweden. Certain statistics are produced with only the register as a basis. The register is continuously updated with information from administrative sources, from Statistics Sweden's own surveys and acquired as feedback from other statistical inquiries.

### **Obligation to supply data**

Under the Ordinance on the general business register (SFS 1984:692), the registers of the Swedish Tax Agency and Swedish Companies Registration Office may be used as sources. Supply of data for the survey of multiple-establishment enterprises is voluntary. Under Section 4 of the Official Statistics Act (1992:889), entrepreneurs are obliged to supply data on their business activity as regards such matters as number of employees.

### **EU regulation**

The content of the FDB is regulated by Council Regulation (EEC) No 2186/93 on Community coordination in drawing up business registers for statistical purposes. Council Regulation (EEC) No 696/93 lays down the statistical units to be used for the observation and analysis of the production system in the Community. Most of these have also been included in the FDB.

### **Structure of the inquiry**

The FDB is continuously updated with information from several administrative sources, the main ones being the Swedish Tax Agency, the Swedish Companies Registration Office and the national change of address recording service, *Svensk Adressändring AB* (SVAAB). In addition surveys are conducted on selected sections of the total register population once or twice a year. Use is also made of feedback from other statistical products.

### **Content: statistical magnitudes, unit groups, population**

Enterprise unit

Establishment

Activity unit

Local activity unit

“AST” unit

Enterprise group

Legal unit

### **Outflow: statistics and micro data**

*Basfakta* (Basic facts) is an annual publication created directly from the FDB. The publication contains data on number of enterprises and establishments broken down by industry and size category measured in number of employees. Micro data are saved in so-called SAMU (*SAMordnade Urval* = coordinated sample) versions four times a year. Similarly all changes between the SAMU versions in March, May, August and November are stored.

### **Timetables**

The register is continuously updated. The November SAMU version is created at the end of each year.

### **Frame and frame procedure**

The FDB provides a frame for statistical inquiries. The register comprises all organisations pursuing some form of economic activity as an enterprise, department or agency of government, State corporations, organisation of the Swedish Church, one of certain non-profit institutions or an estate of a deceased person etc.

### **Measuring instruments**

Data capture takes place mainly indirectly via administrative sources. The bulk of the information, data on the status (active, inactive, closed down), size and activity of enterprises and establishments are obtained from different registers held by the Swedish Tax Agency (SKV). The SKV collects information by way of forms for tax and contribution declarations, income statements, VAT declarations etc., or from the Swedish

Companies Registration Office. Address data are obtained from Svensk Adressändring AB.

For a smaller number of enterprises certain information is collected by way of surveys, which are sent out once or twice a year, depending on the sub-population. The survey contains pre-printed enterprise and establishment data for confirmation or correction by the enterprises concerned. Under the Act concerning Establishment of Numbers and Related Matters (SFS 1984:533), Statistics Sweden is obliged to notify enterprises with more than one establishment once a year of the establishment numbers assigned to the firm's various establishments by the authority concerned. In conjunction with this an inquiry is also sent to the enterprises in question, in which the registered data are recorded and in which the enterprises are requested to make any additions necessary or correct errors.

### **Collection procedure**

The register is continuously updated with information from administrative sources, mainly the Tax Agency and Svensk Adressändring AB (SVAAB) (event-generated frame updating). The register is updated every week with information from the Tax Agency and every other week with information from SVAAB. All known multiple-establishment enterprises are surveyed directly once or twice a year. Other important sources of information are feedback from statistical inquiries and direct contacts with the enterprises.

Where other administrative sources are used and there is a certain in-built delay before the data are recorded, a total time-lag of up to six weeks may be expected between the actual event and the time the data relating to it are present in the FDB. For the number of employees and annual turnover, however, the time-lag may be more than a year because of the sources used (income statements and VAT Register).

### **Data preparation**

The various information sources are assigned values with respect to one another in accordance with a prioritisation procedure. In cases of doubt or in more complicated cases the enterprises are contacted directly. The resulting indications are checked by a machine-aided procedure and are corrected before the actual updating takes place. Updating is carried out every week.

The register records the number of employees. This indication is calculated in most cases by means of a special model using income statements from the Tax Agency. Since the income statements only cover wage and salary-earning employees, the number of employees is lower than the number of persons actually employed, at least for a proportion of enterprises.

The industry code is in most cases set by the local Swedish Tax Agency for the locality in which the enterprise is established. Partial non-response in respect of industry codes can be high for enterprises without employees, while most (>99%) with employees have an industry code. Quality for industry codes is studied in special inquiries or indirectly through feedback from other statistical inquiries and is documented in a special quality document. Sector assignment is established by a machine-aided procedure from data on the ownership category and legal form of the enterprises. For financial institutions, however, the sector is manually coded.

## Observation register

The target and observation units of the FDB fall into seven categories: enterprise units, legal units, establishments, activity units, local activity units, firms and “AST” units.

An **enterprise unit** (*Företagsenhet*, FE) consists of one or more legal units and conducts one or more activities at one or more places. The enterprise unit is usually the smallest unit for which both profit and loss account and balance sheet data are available. For reasons of coordination in certain cases it moves up to a higher level. It may include legal units, which have the status “inactive” in the FDB but are active, for example, in administrative registers. There are survival criteria for enterprise units relative to legal units (for example, an enterprise unit with one establishment and activity unchanged on a change of corporate identification number survives; specification of the criteria is required). In a measurable number of cases, the enterprise unit is an ancillary unit serving several business units (divergence from the EU definition).

A **legal unit** (*juridisk enhet*, JE) is a legal or natural person pursuing or intending to pursue some form of business activity. The practical demarcation of a legal unit is a legal or natural person who is

- VAT-registered and/or is
- a registered employer.

In addition natural persons are treated as legal units if they have at least one registered firm.

The practical demarcation used for a legal unit is:

- all legal persons (excluding estates of deceased persons)
- natural persons who meet at least one of the criteria below
  - \* are VAT-registered
  - \* are registered employers
  - \* have (at least) one registered firm
  - \* are registered for Business Tax
- estates of deceased persons that are
  - \* VAT-registered and/or are
  - \* registered employers.

All legal units, which have been active, and hence have been active in the FDB, are stored for two years before they are removed.

**Establishment** (*arbetsställe*, AE) means every address, property or group of adjacent properties in which a legal unit pursues an activity. All active legal units have at least one establishment. For the registration of an establishment in the FDB a number of conditions must be met:

- Some form of activity must be pursued at the establishment (industry),
- there must be a place at which the activity is pursued (geographically localised unit = address),

- the activity must be pursued over a long period (be permanent),
- the payroll total must be a certain basic amount.

For legal units with geographically separate units, each unit is registered as a separate establishment. For legal units which are locally cohesive (e.g. enclosed by perimeter fencing or in adjoining buildings) and which consist of several units (production, service units etc.) normally only one establishment is registered.

In certain special cases specific criteria are used for the demarcation of establishments. Examples of this are power stations and concrete works of major economic importance.

In those cases in which a locally delimited establishment is divided into functionally defined establishments, this will have taken place after agreement with Statistics Sweden.

For municipalities, a demarcation of establishments based on the various administrations of the municipalities in accordance with the Local Government Act was found suitable. Each administration is recorded at the addresses at which the activity is permanently pursued. Each address within the administration is thus an establishment. This means that several local government establishments may be present at one and the same address. "Normal ancillary activity", such as office cleaning and caretaking services, on the other hand, does not constitute an establishment of the administration itself.

For county councils an establishment demarcation based on the various administrations/boards of the county council is applied. Each administration has to record each address at which the administration pursues permanent activity as a separate establishment. This means that county councils too may have several establishments at one and the same address.

The following are not counted as establishments:

- (i) mobile activities, e.g. taxis, haulage,
- (ii) temporary operating sites, e.g.: construction,
- (iii) movable operating sites, e.g. mobile crushing plants,
- (iv) the home, e.g. weather monitoring, home dressmaking.

In cases (i) - (iv) the activity is assigned to the establishment from which it is effectively administered. The home address is the location address if the legal unit only has one establishment and the activity is of type (i) – (iv).

Examples of what are not establishments:

- timber felling,
- mobile crushing plants set up for a period shorter than one year,
- extraction of gravel and sand without fixed installations and buildings and without manning,
- power stations <100 kW for public use, and <400 kW for other use,
- construction sites irrespective of the period of construction and stores, workshops etc. which only exist for the time construction is in progress,
- branches of the National Corporation of Swedish Pharmacies and the Swedish Alcohol Retailing Monopoly housed in the premises of another business and served by the ordinary staff of that business,
- staff canteens at an establishment with a different activity serving its own staff and



operated by its own staff,

- camping sites, outdoor swimming pools, ski slopes without special installations of major economic significance,
- outlets of newspaper distribution firms for newspapers sold, for example, at kiosks, filling stations and the like,
- ships and boats are assigned to the establishment from which they are managed; shipboard personnel on vessels plying foreign trade are not counted in the number of employees,
- cleaning companies performing cleaning work at the premises of other enterprises are not normally registered as establishments,
- educational activities of workers' education associations on rented premises (which are not at the same time used as offices or administrative facilities),
- enterprise health and medical services of normal scope,
- summer kiosks, summer sales outlets,
- truck drivers seconded by haulage firms to other larger haulage firms and forwarding firms,
- croupiers, cloakroom attendants employed by separate enterprises housed in restaurants,
- lottery stands sited in department stores, on city squares and the like.

The **kind of activity unit** (*Verksamhetsenheten*, VE) groups parts of an enterprise unit which contributes to the performance of an activity on a particular SNI level ("industry"). The kind of activity units represents a complete subdivision of the enterprise unit. In a few cases the kind of activity unit is an ancillary unit, which could not be assigned to other kind of activity units. The subdivision of the enterprise unit should give kind of activity units, which fall more or less entirely within a single industry. Compromises are necessary to take account of the capacity to provide data. On the one hand, the industry of the kind of activity unit is given with a percentage indication of its assignment to that industry and, on the other hand, SNI codes on a five-digit level (in the same way as for other types of unit). The classification reflects the wishes of the data provider, which is why in individual cases several kind of activity units can be present within an enterprise unit with the same industry classification. For reasons of coordination, a kind of activity unit must not change over time without good reason. An enterprise unit is also subdivided into kind of activity units if a balance has to be struck between the degree of disruption to the statistics due to inconsistencies in industry assignment and the drain on resources for the maintenance of the units. If the disruption to the statistics, overestimation and underestimation in the industries in question, becomes unacceptable, the enterprise unit is divided up into kind of activity units.

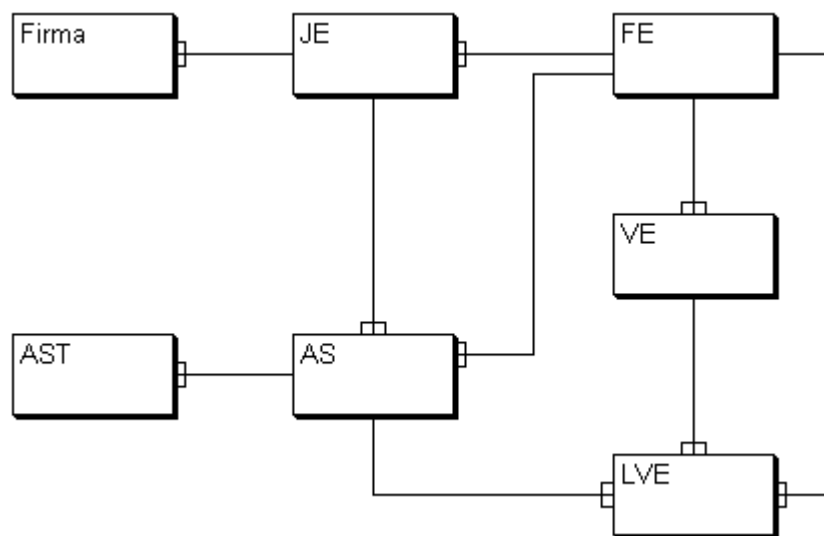
The **local kind of activity unit** (*Lokala verksamhetsenheten*, LVE) is that part of a kind of activity unit which functions within a local unit. It may also take account of the wishes of data providers regarding subdivision by areas of business and the like. Hence in individual cases several local kind of activity units may exist within an establishment with the same SNI code. A local kind of activity unit may have secondary activities. The SNI coding is on a five-digit level.

A **local kind of activity unit** – hence also a kind of activity unit – with an activity extending beyond that included in its industry contributes a little too much to that industry in the statistics, and at the same time the activity disappears from one or more or other recording groups. The aim is that interference from these "surpluses and shortfalls" should be negligible in the statistics.

The **firm unit** (*Firma-enhet*) is related to a natural person. A natural person can have one or more registered firms. In those cases no administrative source is available to decide which of the firms is/are active.

The “**AST**” unit is separate from the enterprise. The staff is linked to these units, which are used inter alia for income statements. It is appropriate to have links between establishments and the units used in the income statement material and to show mobile staff. In order to achieve this, the link is maintained between AST units and establishment units.

The relationships between unit types are shown in the diagram below:



## **The VAT Register (2002) - Administrative data**

### **Purpose and history**

The VAT register contains data on value-added tax paid for all enterprises. The register is built up for the most part from the VAT declaration data of the Swedish Tax Agency; other material is collected from Swedish Customs.

Statistics Sweden has used data from the VAT declarations since 1972. Until 1992 these were only used in order to produce the regional turnover statistics for service industries (*regionala omsättningsstatistiken för tjänstenäringsar*, REGO).

The number of enterprises recording VAT in a separate VAT declaration decreased from about 450 000 to 350 000 after the raising of the VAT threshold from SEK 200 000 to SEK 1 million in 1996. Statistics Sweden now receives declaration data once a month over the telecommunications network.

### **Users and areas of use**

The national accounts use data as additional information in calculating household consumption expenditure. Because there is a lower rate of VAT on food, food sales can be recorded for different industries. The FDB uses VAT as one of the variables, which determine whether an enterprise is active or has ceased trading. REGO is produced by matching the FDB with the VAT Register.

Turnover data are used as an allocation variable in a number of samples in the SAMU system, especially in inquiries in which we measure turnover and changes to it. Thanks to this, it has been possible to make the samples smaller while maintaining precision. In these samples the VAT data are used as an auxiliary variable in calculating the turnover in question, as well as in adjusting for non-response. The data from the VAT Register have also been used in the calculation of regional accounts, in RAPS II for industries in Skåne and in the calculation of international trade.

In a number of other branches of statistics which do not primarily measure turnover, turnover data are collected for selected enterprises and as a total for certain industries. The data are used partly as a control variable and partly as an aid to the management of non-response. An indication is obtained of the extent of an enterprise's activity.

### **Obligation to supply data**

All VAT-registered enterprises are obliged to supply data on value-added tax in a separate tax declaration to the tax administration. Statistics Sweden does not collect the data directly.

### **EU regulation**

There is no EU regulation for the VAT Register.

### **Structure of the inquiry**

The VAT statistics are a register-based compilation of VAT declarations for enterprises. The register is supplemented continuously (monthly) with the latest month's transactions for all taxable entities during the month. The aim of the register is to produce records of taxes and turnover for users.

## Population

All enterprises, which are registered for VAT with the Swedish Tax Agency.

## Recording groups

Unit group		Variable	Measurement
Population	Subdivision by recording groups		
Enterprise	Industry assignment, region, institutional code, size	Turnover data, tax, exports in SEK 1000	Total

Variables recorded:

**Turnover** – Turnover is obtained from the VAT declarations of the enterprises. Taxable turnover is calculated from tax recorded; tax-free amounts and exports are covered in their original form. The data are subjected to a general form of scrutiny, in the course of which obvious keying errors are corrected.

**Number of enterprises** – The data on numbers includes all entities which pursued **an activity at some time during the year** and which submitted a VAT declaration. An enterprise, which is reorganised during the year, is counted as two enterprises. In the same way enterprises, which record VAT through their parent company or an affiliated company are not included.

**Number of employees** – This is the number of employees (not persons employed) registered in the enterprise, which supplied a VAT declaration. Self-employed persons or partners in a partnership are not included in the number of employees. The figures for these enterprises are obtained from Statistics Sweden's business register.

## Timetable

Continuously as supplied by the Swedish Tax Agency (monthly) with about two months' time-lag.

## Frame and frame procedure

The VAT Register of the Swedish Tax Agency (SKV) is the frame. Enterprise name, industry, municipality and number of employees are matched from Statistics Sweden's business register with the aid of corporate identification numbers. Unmatched items from the SKV are included without this auxiliary information.

## Sampling procedure

Full census.

## Measuring instrument

The VAT declaration submitted by enterprises to the SKV.

## Collection procedure

The data are obtained from the SKV's joint information database, GIN (*Gemensam Information*). The data are obtained electronically from the SKV. Transfer takes place each month.

### **Data preparation, registration, scrutiny and correction**

The register is updated with new/changed data for all taxable entities affected during the month. Each amount is recorded as a change in relation to the previous situation for the same taxable entity and period (first declaration as a change from zero). I.e. amounts are always calculated as a change in relation to the amount last registered/updated. Positive amounts are indicated without a sign. Negative amounts are indicated with a minus sign. During the updating the following variables are subject to special scrutiny:

M32\_Output VAT – high  
M33\_Output VAT – medium  
M34\_ Output VAT – low  
M37\_Deductible VAT included  
M12\_VAT-free turnover within Sweden  
M14\_Turnover in goods and services subject to marginal rates of tax  
M15\_Assessment base for goods and services subject to marginal rates of tax  
M21\_Turnover in goods outside the EC  
M22\_Turnover in services provided abroad  
M23\_Turnover in goods for other EC countries  
Converted turnover subject to VAT within Sweden

The values of these variables are compared with the declarations previously registered/updated for the same enterprises. All items are checked which show major deviations (e.g. 10 times or 0.1) and which exceed the threshold (e.g. at least SEK 10 million) in any of the variables scrutinised. However, deviations are accepted if at least five variables are divergent.

The following variables are redundant information and are updated from the FDB:

Size category  
Number of employees  
Industry  
County – municipality  
Sector  
Ownership category  
Legal form

Sector, Ownership category and Legal form constitute the Institutional code.

Redundancy is required in order to obtain a picture of the situation (e.g. if it is desired to have data on industry changes). The items present in the FDB are marked “J” in the FDB column. On each updating, all new items and those which do not have “J” in the FDB column are updated. The date of this updating is recorded in “DatumFDB”.

The variable Converted turnover subject to VAT within Sweden: the indication obtained from the SKV is not used; the variable is instead projected in the following way:

Converted turnover subject to VAT within Sweden = Tax amount divided by tax rate for the tax rate in question for the period concerned.

The users themselves can start the updating and scrutiny process in the form of batch runs. Before the runs are started they can also determine which year is to be updated, change tax rates, choose which months are to be scrutinised and determine limits for the scrutiny. After the updating users can scrutinise all declarations and major deviations interactively. All numerical variables can be corrected in the course of the scrutiny.

**Declarations** to be scrutinised and corrected are shown in two different ways:

1. Declarations for a certain industry and month, sorted in descending order by total turnover.

Total turnover is updated as the sum of (M14-M15), M12, M21, M22, M23 and Converted turnover subject to VAT within Sweden.

2. All declarations for a certain enterprise, sorted in descending order by period or total turnover. It may help users to determine any change more easily.

It is also possible to scrutinise and correct all **deviations**, which arose during the previous updating. If errors are found, SKV sends information to SCB. On an aggregated level these are negligible but could have an impact on enterprise or detailed activity level

#### **Target units**

All VAT-registered enterprises in Sweden, which have supplied data on VAT paid during the year.

#### **Observation units**

All taxable entities affected during the month.

All VAT-registered enterprises in Sweden according to the FDB.

#### **Experience, problems**

Enterprises in a group may record turnover as a total amount for several companies. This of course becomes a problem if the companies operate in different industries. Definitions of turnover, especially export turnover, may differ considerably from other inquiries. For example, all sales of inventories are counted as turnover, not only possible capital gains. Property income on the other hand is not included at all.

#### **Estimates: assumptions and calculation formulae**

Estimates do not arise. Taxable turnover is compiled as recorded tax divided by the tax rate applicable:

$$\text{TnvSweden} = \text{M32\_OutpHigh} / \text{Tax rate\_OutpHigh} + \\ \text{M33\_OutpMed} / \text{Tax rate\_OutpMed} + \\ \text{M34\_OutpLow} / \text{Tax rate\_OutpLow}$$

## 11.1 Statistical surveys and other data sources used for the production approach

### Structural Business Statistics (SBS) 2005

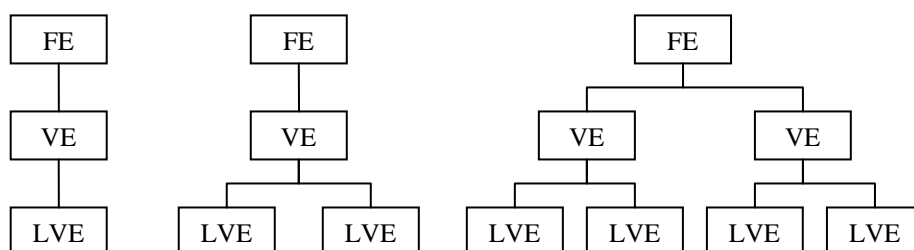
#### Link to surveys undertaken at the European level

The Structural Business Statistics are the main source for the statistics covered at EU level by “Council Regulation No 58/97 concerning structural business statistics” and has therefore been adapted to that regulation. The statistics are produced by Statistics Sweden.

#### Reporting units

The entity surveyed is the enterprise unit, which in most cases coincides with the legal unit or the accounting unit. In exceptional cases collection may be undertaken at the level of a group of companies or some other consolidation of several legal persons. The term enterprise covers the following legal forms: company limited by shares, incorporated and unincorporated partnership, self-employed trader, incorporated association/cooperative society and certain other legal forms which engage in trading activity. In those cases in which enterprises operate in several activities, the enterprise is divided into kind of activity units based on the activities pursued. If the enterprise pursues activity in several different geographic locations, the enterprise is divided into local activity units in accordance with the geographic distribution. This subdivision facilitates coverage at institutional level (enterprise), functional level (industry) and regional level (geographic localisation). The division of enterprises into activity units and local activity units is mainly applicable to enterprises in manufacturing industry (NACE Rev 1.1 C-D).

**Figure 1: Overview of different enterprise structure**



FE = *företagsenhet* (enterprise unit)

VE = *verksamhetsenhet* (kind of activity unit)

LVE = *lokal verksamhetsenhet* (local activity unit)

#### Periodicity

The data refer to the calendar year. For the largest, most important surveyed enterprises with a split accounting year, however, this recording period is applied in such a way that the figures cover end-of-year accounts between 1 May in the calendar year in question and 30 April of the following calendar year. For accounting years covering a period shorter or longer than 12 months, figures are converted in order to reflect 12-month flows. For enterprises with split accounting years, in the administrative material the figures relate to the recording period which ends during the calendar year. Here too, however, the flow data are calculated in order to cover 12 months.

The table below shows the distribution of book closing months.

Month of book closing	No. Of enterprise units	No.of correct months	No.of incorrect months	correct output	"incorrect" output
1	37	407	37	26 244	2 386
2	90	900	180	24 008	4 802
3	444	3 996	1 332	49 745	16 582
4	36 813	294 504	147 252	191 019	95 510
5	81	405	567	1 811	2 535
6	37 016	222 096	222 096	117 921	117 921
7	88	616	440	2 006	1 433
8	37 414	299 312	149 656	236 130	118 065
9	575	5 175	1 725	39 236	13 079
10	163	1 630	326	22 977	4 595
11	190	2 090	190	20 565	1 870
12	758 254	9 099 048	0	5 037 854	0
<b>Sum</b>		9 930 179	523 801	5 769 515	378 776
<b>Share "incorrect"</b>			0,050		0,062

### **Time of availability of results**

The inquiry must be published at the latest 18 months after the close of the inquiry year.

### **Sampling frame**

The sampling frame is based on the Swedish Business Register (BR), kept at Statistics Sweden. The frame consists of all enterprise units (and attached kind of activity units), which are active in November the reference year. The sampling frame serves as the common population for different surveys conducted within the Swedish SBS system. In the SBS system there are four different major surveys; Survey on basic variables, Specification survey on income and costs (SpecRR), Specification survey on Investments (SpecI) and the Specification survey on shares and assets (SpecA). A brief description of the sampling design for each of these four surveys is given below.

### **Survey is compulsory or voluntary?**

For that part of the inquiry in which data are collected directly from the enterprises there is a legal obligation to report data to Statistics Sweden. Provisions in the Swedish Code of Statutes (SFS 2001:99 and 2001:100) state that the statistics are compulsory.

The special regulations of Statistics Sweden on business statistics are published in Statistics Sweden's own Code of Statutes (SCB-FS 2004:03).

The other part of the inquiry is based on administrative material consisting of declaration data from enterprises, which are obliged to supply data to the tax authorities for tax assessment purposes.

### **Main features of survey methodology**

The purpose of the business statistics is to provide information on the structure of industry (excluding the financial sector) in relation to such aspects as profitability, growth, trends, financing and production. Analysis can take place both on an aggregate level and in the



form of median and quartile values. Analysis can be carried out nationally, industry by industry and, for manufacturing industry, also at regional level.

#### *Survey on basic variables*

This survey is the core of the Swedish SBS since all other surveys and data sources, within the SBS-system, serves as further specifications to items in this survey. The survey is almost entirely based on the Tax data-material, which Statistics Sweden receives from the Swedish Tax Agency. The tax data is used for all of the population except for the about five hundred largest enterprises, who are surveyed through a traditional questionnaire.

#### *Specification survey on income and costs (SpecRR)*

The survey is conducted as a sample survey. The sample is stratified according to activity resulting in the use of approximately 200 hundred different strata. Within each stratum a sample with inclusion probabilities proportional to size is drawn. The total sample size is approximately 15.000 enterprises.

#### *Specification survey on Investments (SpecI)*

In this survey cut-off sampling is used. All enterprises with investments (according to the Survey on basic variables) exceeding 5 million SEK is included in the sample. If any of these objects has already been surveyed in the short-term survey on Investments also conducted at Statistics Sweden the information is collected from that survey rather than demanding it from the enterprises themselves once more. Approximately 8.500 enterprises are included in this survey.

#### *Specification survey on shares and assets (SpecA)*

Finally we have the survey on shares and assets. Since there are no requirements on breakdowns according to activity for this part of the SBS, the sample is not stratified according to activity. There is stratification according to size and in each size-class a simple random sample is taken. The total sample size amounts to about 1.000 enterprises.

### **Population size**

The target population includes all enterprises, which engaged in an activity during the reference year, excluding financial corporations and self-employed operators engaging in agriculture, forestry, hunting or fishing.

### **Sample size**

The table below indicates the sample size by industry and enterprise size in the Spec-RR-survey.

Division (NACE Rev 1.1 classification)	Turnover (SEK)	0-19 employees		20- employees	
		Population size (N)	Sample size (n)	N	n
C+D	1 676 952	56 875	329	3 996	1 531
E	191 392	1 201	58	174	110
F	312 550	63 123	524	1 296	324
G	1 781 264	120 812	2 248	2 982	957
H	74 648	24 251	169	711	193
I	501 020	30 870	475	1 120	385
K	745 548	215 024	4 085	2 494	1 320
M+N	92 363	35 542	394	954	267
O	120 705	70 411	623	364	240
Total	5 496 442	618 109	8 905	14 091	5 327

### Survey response rate

The table below indicates the extent of non-response in the Survey on basic variables 2005.

Division (NACE Rev 1.1 classification)	Total number of enterprises	Turnover (SEK)	Non-response (%)	
			Un-weighted	Weighted by turnover
A+B	188 678	114 193	11	6
C	656	29 869	11	1
D	60 215	1 647 083	13	2
E	1 375	191 392	11	2
F	64 419	312 550	14	4
G	123 794	1 781 264	16	4
H	24 962	74 648	16	7
I	31 990	501 020	11	2
K	217 518	745 548	18	5
M	12 201	25 099	20	13
N	24 295	67 264	15	4
O	70 775	120 705	19	5
Total	820 878	5 610 635	15	3

### Method used to impute for missing data

Imputation rather than weight adjustment is used to handle both unit and item non-response in all of the four surveys carried out within the SBS-system. For larger enterprises manual or expert imputation is used whereas for the smaller enterprises group wise mean value imputation is used. The imputation groups are created with respect to both activity and size. The main source for the manual imputations is the Annual reports.

### Sample coverage

The sampling coverage varies among the four surveys. In the Survey on basic variables we strictly speaking don't have any sample errors since we don't make any sample. But since we do have non-response in the Tax data we have non-response errors. If we take this into account the Tax data together with our own data collection from the five hundred biggest enterprises covers around 96 per cent of the estimated total for Value added.

In the SpecRR-survey the sample coverage amounts to 66 per cent with respect to Turnover. If non-response is taken into account the coverage rate drops to 62 per cent.

In the SpecI-survey the sample coverage amounts to 62 per cent with respect to total Investments in real estate.

In the SpecA-survey the sample coverage amounts to 76 per cent with respect to total amount of shares and assets.

### Main variables collected

The Structural Business Statistics cover about 1 000 variables. The purpose of the variables is to measure enterprise structures and industry structures. In the Survey on basic variables the variables generally speaking follow the annual reports of enterprises and include a large number of profit and loss account and balance sheet data.

We then ask for specifications to those annual report variables in the SpecRR-survey. For example we ask for specification of net turnover on activities, sales within/outside the group, domestic sales/exports and detailed statement of costs.

The SpecI-survey include acquisitions and assignments in various types of assets; machinery and equipment, buildings, land improvements etc. The acquisitions in buildings, land improvements etc should also be divided up in New-, extended and reconstruction of buildings and Existing buildings, land improvements etc.

In the SpecA-survey we ask for shares within/outside the group, shares in Swedish/foreign enterprises and quoted/unquoted shares.

#### **Further adjustments made to the survey data**

The variables recorded are presented in the form of total data and certain ratios. A large number of assumptions arise in the inquiry, which are not covered by the above headings. An example of such model assumptions concerns those enterprises, which are not covered by the administrative material. We assume that these enterprises are exclusive to one industry and only consist of one activity unit. Thus a situation does not arise in which an enterprise is subdivided into different activity units in the administrative material. Further model assumptions are made in the calculation of investment for enterprises in the administrative material and in recording at regional level.

## **Economic Accounts for Agriculture – EAA (2005)**

### **Link to inquiries conducted at European level**

Regulation (EC) No 138/2004 of the European Parliament and of the Council of 5 December 2003 on the economic accounts for agriculture in the Community. The agency responsible for the statistics is the Swedish Board of Agriculture.

### **Reporting units**

Enterprises belonging to the agricultural sector.

### **Periodicity**

Annual.

### **Results availability**

The material is produced continuously throughout the year. Publication is three times per year: November (prognosis for next calendar year), January (preliminary result for previous calendar year) and October (final results for the previous calendar year).

### **Sampling frame**

The sector calculations are built up from data drawn from different sources such as The Swedish farm register (LBR), estimates for harvest, statistics of slaughter, index and retail prices for foodstuffs according to Consumer Price Index and accounts. The EAA also regard leaseholds and costs of depreciation for machines and tools.

### **Compulsory or voluntary?**

Supply of data on agriculture is compulsory under the following statutory provisions: SFS 1992:888, SFS 1992:1032 and SFS 1993:652.

### **Main features of survey methodology**

Economic trends in the agricultural sector as a whole are monitored by the Swedish Board of Agriculture. The total income and costs of the sector and the operating surplus representing the difference between the two are calculated. The calculations should only include income from agricultural production proper and costs associated with it. The income of farmers from other industries, e.g. forestry, is not included. This means that the operating surplus in the sector calculations is not a measure of the total income of farmers as many farmers also are forest owners.

The value of transactions taking place in the sector is not recorded. For goods, which leave the sector but subsequently constitute intermediate consumption in production a net cost is recorded, called trade and processing margins, as a separate cost item. As regards that portion which is sold to the animal feed industry and is then repurchased in the form of feed mixes only trade and processing margins are entered as a cost. Income is only recorded in respect of that portion which leaves the sector and is consumed outside it.

The calculation seeks to show total economic trends in the agricultural sector. The calculation is used as a basis for agricultural policy assessments of changes in the agricultural sector. The data recorded cover not only values but also volumes (applicable to the income side and to certain items on the expenditure side). The latter data are sometimes used in isolation in order to assess production changes in agriculture.

Extensive reports on sector calculations containing source references and long time series are produced intermittently. Such a report (*EAA-Ekonomisk kalkyl för jordbrukssektorn* [Sector calculation for Swedish agriculture] 1995 – 2006) was completed in October 2007.

### **Population size**

The units and population are made up of the enterprises included in the agricultural sector in accordance with the EU definition of this sector. The population is consistent with that in the Swedish farm register, which amounted to some 76 000 units in 2005.

### **Sample size and survey response rate**

The sector calculations are built up from data drawn from different sources. It is thus not possible to provide a generally applicable indication of sample size or response rate; certain data are based on large samples, others on smaller samples.

### **Method used to impute for missing data**

For some cost items there are only data for certain sections of the farming population. For the remainder certain systematic assumptions are made.

### **Variable used for grossing-up to the population**

The statistics are based on estimates of totals and quotas. The estimates of totals are:

- Production value per product.
- Agricultural subsidy per product.
- Cost per type of cost.

The estimates of quotas are indexes of volume, price and value.

### **Sample coverage**

It is difficult to give a measure of confidence for the data recorded, since they are based on statistics from a multiplicity of different sources, mainly price and production data, yield estimates and economic statistics for agriculture on a micro statistical level. On the income side certainty is high since it is based on reliable macro statistics. On the cost side it is more difficult to assess certainty, since a number of cost items are based on systematic assumptions. Estimates for the different types of costs are based on aggregated accountings from about 11 000 units. Uncertainty in the forecasts and preliminary calculations made is considerable, and the final calculations recorded later may diverge significantly from the forecast values. On the cost side there is under-coverage for certain items.

### **Main variables collected**

Primary material is not included within the framework of this statistical product, apart from the horticultural side (which in the EU perspective forms part of agriculture) and costs for pesticides, fertilisers and machinery and equipment. Otherwise the sector calculation is based on compilations and processing of other statistical material.

### **Variables**

Operating surplus for the agricultural sector together with income, costs and output values for the products and services, which leave the agricultural sector or are purchased by it.

In the final results for last calendar year, published in October, the following variables are reported:

- Yearly value of production by product/service in both current and fixed prices.
- Yearly costs by type of cost for agriculture production in both current and fixed prices.
- Yearly benefit by agricultural subsidies.
- Yearly value added by processing and value of other measures of result.

The prognosis and preliminary results only consist of development from last year. For groups of products and types of costs the following three indexes are reported:

- Volume index
- Price index
- Value index

### ***Groups of accountings***

The prognosis and preliminary results consist of the following groups of products, other types of incomes and types of costs:

- Grain, industry crops, fodder-plants, garden- and nursery plants, potatoes, fruit, berries and other plants and vegetable products.
- Animals and animal products.
- Agricultural services.
- Secondary non-agricultural activities.
- Agricultural subsidies.
- Use of investments.
- Capital destruction.
- Wages and collective fees.
- Leasehold- and rental costs.
- Interest charges and incomes from interest.

In the final results are accounted in more detailed levels:

### ***Examples of income items***

Autumn wheat, Spring wheat, Rye, Total cereals (excluding feed grain), Barley, Oats, Cooking peas, Total other grains, Table potatoes, Processing potatoes, Sugar beet, Total potatoes and sugar beet, Feed for leisure horses, Export of hay, Oil crops, Kitchen vegetables, Milk for dairy production, Milk other than for dairy production, Milk for home consumption, Eggs, Slaughter of poultry, Mature cattle, Large calves, Smaller calves, Horses, Sheep, Pigs, Residual payments, Wool and sheepskin, Export of live animals, Low income action (includes money for stand-in schemes and social security), Residual payments from farmers' union, Compensation for crop damage, Direct disbursements.

Changes in livestock

### ***Examples of cost items:***

Motor fuels and lubricants, Fertiliser, Lime, Purchased feeds, Miscellaneous requisites, Electricity, Freight, Drying costs, Inspection costs, Insemination costs, Hire of machinery, Trade and processing margins, Personal transport, Other services, Insurance, Stand-in services.

Depreciation: Buildings, Ground installations, Machinery

Maintenance: Buildings, Ground installations, Machinery

Interest charges, Interest income, Net interest costs  
Tractor tax, Hired labour

***Measures of result***

The measures of result in EAA in basic price are counted in the following way:

+ Value of production of vegetables  
+ Value of animal production  
+ Revenues from agricultural services  
+ Revenues from secondary non-agricultural activities  
= *Total value of production*

- Costs for intermediate consumption  
= *Gross value added by processing in basic price*

- Capital destruction  
= *Net value added by processing in basic price*

+ Other so-called production subsidies.  
= *Factor income*

- Wages and collective fees  
= *Net operating surplus*

- Leasehold- and rental costs.  
- Net interest costs  
= *Incomes from enterprises*

## **Statistics on operations in large-scale and small-scale forestry (2004)**

The statistics are produced in two separate inquiries known as “Statistics on operations in large-scale forestry” and “Statistics on operations and employment in small-scale forestry”.

### **Link to inquiries conducted at European level**

There is no EU regulation. The inquiry on large-scale forestry is produced by the National Board of Forestry/county forestry boards and that on small-scale forestry by Statistics Sweden (National Board of Forestry in some parts).

### **Reporting units**

Large-scale forestry (more than 5 000 hectares): data are collected in a postal survey of the various county forestry boards, coordinated by the National Board of Forestry (SKS). Each enterprise questioned decides for itself what level in the enterprise should respond to the survey. As rule the questionnaire is answered at management level. The data requested are normally readily available in the internal systems of the enterprises. In those cases in which a management covers several counties, a county forestry board having the requisite administrative responsibility is chosen. The county forestry board collects the data for all counties covered by the management.

Small-scale forestry (between 5 and 5 000 hectares): the inquiry is conducted by telephone interviews with the district rangers of the county forestry boards. Landowners are given prior notice of the interview 1-3 weeks before the date of the interview. The ranger completes the questionnaire and ensures that it is returned to Statistics Sweden for processing.

### **Periodicity**

Annual.

### **Results availability**

Five months.

### **Sampling frame**

All forestry enterprises in the forestry data register of the National Board of Forestry.

### **Compulsory or voluntary?**

There is no obligation to supply data.

### **Main features of survey methodology**

The National Board of Forestry has published statistics on forestry operations since the 1940s. The methods varied but the aim was to quantify the extent of the main silviculture operations in Swedish forestry.

Normally different routines are used for large and small forestry enterprises. Inquiries on large-scale forestry are conducted and the data recorded jointly with the inquiries on small-scale forestry. Together the two inquiries cover forestry as a whole. The present procedure for statistics on operations in large-scale forestry has been applied since 1983. Apart from the production of statistics, the micro material is used by the county forestry



boards for certain official monitoring procedures. The comparability of the statistics over time is considered very good.

**Population size**

Large-scale forestry: all forestry enterprises in large-scale forestry. These are total approximately 150 enterprises.

Small-scale forestry: the population consists of all economic units which are not included in large-scale forestry and which have more than 5 hectares of forest land. These are total approximately 200 000 enterprises

**Sample size**

Large-scale forestry: the demarcation of the population is determined in consultation with the National Board of Forestry and the county forestry board concerned. A total of approximately 150 enterprises are included. In the main all enterprises with over 5 000 hectares of forest land are included in the inquiry.

Small-scale forestry: stratified samples by counties and size categories according to area of forest land. The sample is approximately 2 200 economic units out of a total of 200 000 in the sampling frame.

**Survey response rate**

Large-scale forestry: the statistics are a full census and all large forest owners reported operations completed. Some ten smaller forest owners did not supply information. These ten own less than 2% of the area owned by the 150 or so enterprises in the population.

Small-scale forestry: the non-response rate varies normally between 7% and 9%, which is considered low.

**Imputation method**

Small-scale forestry: Statistics Sweden enters and scrutinises the material by a machine-aided procedure. Surveys in which an apparent anomaly is detected are sent to the National Board of Forestry, which queries the matter with the district ranger concerned. Non-response is dealt with by mean-value imputation.

**Grossing method**

The variable used for grossing to population level is the population in relation to the number of responses received per stratum.

**Sample coverage**

Altogether the inquiries provide a complete picture of operations performed in timber felling and silviculture.

**Main variables collected**

The main variables are areas and volumes of timber felled, area of forestry operations performed and share of activity on own account in timber felling and silviculture.

*Timber felling:*

Area of regeneration felling

Area of thinning

Volume of regeneration felling

Volume of thinning,

Volume of other felling

Removal of branches and tops for energy purposes in regeneration felling,

Removal of branches and tops for energy purposes in thinning.

*Sylviculture operations:*

Mechanical soil preparation

Controlled burning

Protective drainage

Planting

Sowing

Supplemental planting and replanting

Contort planting

Cleaning-thinning

Fertilisation

Pruning

*Other:*

Drainage

Forest road construction.

## **Felling volumes in forestry and wood measurement (2007)**

The annual estimates of the gross felling for the entire country are carried out continuously according to two methods: The Swedish Forest Agency's gross felling model and on the stump enumeration according to Swedish National Forest Inventory (NFI).

**The model described below, which was developed at the Swedish Forest Agency, forms the main basis for the national accounts calculations of felling volumes in forestry. The National Forest Inventory is described in the next section.**

### **Link to inquiries conducted at European level**

Roughly every five years statistics are supplied by the Swedish Forest Agency and the National Forest Inventory to international organisations such as the FAO and OECD. The statistics refer to national values and cover forested areas, timber stocks, biomass, increment and natural thinning.

The EU publication Forestry statistics presents Eurostat's forestry statistics for the EU for the period 1995-2005. Data on forest resources have thus been taken from the Food and Agriculture Organisation of the United Nations (FAO) and the Forest Resources Assessment (FRA).

### **Reporting units**

Almost all delivery timber is measured by one of the country's measurement societies. The production of saw timber products is calculated with the aid of data obtained partly from members of the Swedish timber goods producers' associations and partly from a sample survey carried out by Statistics Sweden among other establishments which engage in timber sawing.

Data on the production of paper pulp are obtained from the trade association of forestry industries.

Data on supply figures are collected both from the trade associations and with the aid of intermittent inquiries carried out by the Swedish University of Agricultural Sciences at the request of the Swedish Forest Agency.

### **Periodicity**

Annual.

### **Results availability**

In February there is a preliminary calculation of timber felled in the previous year. In April-May a final calculation is carried out for actual felling in the previous year.

### **Compulsory or voluntary?**

There is no obligation to supply data on carried out felling. Forest owners are legally bound to give the Swedish Forest Agency at least six weeks advance notice of planned final felling exceeding 0.5 hectares. Notification of final felling is valid for two years (renewable) and permits for final felling are valid for five years. Statistics for notified felling or granted permits for final felling do not correspond with final felling statistics.

Notified final felling and granted permit felling is not always carried out and default is more common in large-scale forestry than private ownership.

Because of this the Swedish Forest Agency's (SFA's) gross felling model is instead based on industrial production of sawn softwood and wood pulp.

### **Main features of survey methodology and imputation method**

The Swedish Forest Agency's (SFA's) gross felling model is based on industrial production of sawn softwood and wood pulp. Wood consumption figures are assumed with the help of consumption factor to produce different products. Addition for consumption of broad-leave saw logs, wood in board industry, fuelwood and other wood are made. The figures are then adjusted from the foreign trade of roundwood and chips, together with the changes in the stocks of roundwood and chips. The gross felling is finally computed by adding the volumes of cut whole trees, left in the forest.

In the final model data used on roundwood consumption is according to the Wood Measurement Societies. Measurement and scaling of roundwood is almost exclusively carried out by three independent societies. Volume and quality class selection are calculated in the tables but the volumes are not to be mistaken for the volume of felled trees, as imported wood is also included in the measurement.

The calculation is performed on actual consumption from previous years but is adjusted for changes in the product mix during the year in question. However, adjustment also has to be made for cross-cut marking, waste etc. This is done with the aid of an adjustment factor.

Woodchips supplied by sawmills to the pulp industry must be deducted from the intermediate consumption of pulp wood in order to obtain consumption of stem wood. The production of woodchips is calculated by multiplying the production of sawn timber by a factor obtained from the latest Sawmill Inventory. The proportion of woodchip production going to the paper pulp industry was also obtained from the same report.

A supplement is included for the consumption of hardwood saw timber, wood in the board industry, firewood and other wood (piles, poles, charcoal wood, veneer timber and matchwood, props, mining timber and wood for agriculture, excluding saw timber). The data are corrected with data from international trade in round timber and woodchips and changes in round wood and woodchip inventories. The extrapolated consumption volume is taken to be the removal of timber, measured as net felling during the year in question.

### **Sample size, sample coverage and grossing method**

Full census.

### **Survey response rate**

The statistics of the Swedish Forest Agency's gross felling model are only marginally affected by non-response.

### **Main variables collected**

The report covers felling statistics, calculated annual removals and notified final felling areas. Some data about marking for cutting and wood measurement statistics are also included.

The calculation of net felling is based on round wood consumption broken down as follows:

- Softwood timber, including veneer timber.
- Hardwood timber.
- Stem wood for the paper pulp and fibreboard industry.
- Stem wood for fuel.
- Other timber.

## **National Forest Inventory, description of the forest status, forest increment, felling operations performed and some descriptive variables in Sweden's forests (2001-2005)**

### **Link to inquiries conducted at European level**

Roughly every five years statistics are supplied by the National Forest Inventory to international organisations such as the FAO and OECD. The statistics refer to national values and cover forested areas, timber stocks, biomass, increment and natural thinning. The statistics provide good international comparability. The agency responsible for National Forest Inventory statistics is the Swedish University of Agricultural Sciences (institute for forest resource maintenance and geometrics).

### **Reporting units**

Field collection is carried out by survey teams from the Swedish University of Agricultural Sciences.

### **Periodicity**

Annual.

### **Results availability**

Data collection is carried out in the period May-September. The material is normally ready by the end of the year. The annual publication "SKOGSDATA" is normally published in Mars-May.

### **Sampling frame and population size**

All land area of the entire country, since 2003 including national parks and nature reserves. On tree-bearing land the inventory process is organised in such a way that estimates of timber stocks, increment and felling can be made. However, the following categories of land are excluded from this type of inventory in the ordinary surveying process:

- Mountainous areas, including mountain birch forest
- Urban land
- Certain military areas

### **Compulsory or voluntary?**

There is no obligation to supply data. The material produced is collected by authorised officers and, amongst other things, provides a basis for the formulation of the nation's forestry policy.

### **Main features of survey methodology**

The Swedish National Forest Inventory estimates the annual gross felling by recording the stumps from the latest finished felling year. A felling year is the period between two consecutive buddings (the time when the buds are opening in the spring). One of the variables measured is occurrence of the fresh stems on the plots. Stumps with diameter equal to five centimetres or exceeding five centimetres are included in the inventory.

The National Forest Inventory is a nationwide, annual spot-sampling inventory of the country's forests and has been conducted since 1923. Its main purpose is to provide a relevant basis for forestry policy, but it also serves the forestry industry and forestry research. Over the years methods have changed, and the content has been expanded to

cover more than forestry as such. Thus the inventory of types of ownership, which can be attributed to forest land, has been expanded and the content has become more comprehensive. It can be said that the inventory has come to provide an ever increasing amount of information of an ecological and environmental nature, a development moreover which will in all probability continue.

The overriding aim of the inventory process has not undergone any major changes. Comparisons over time are therefore possible and form an important part of the recording. This applies in particular to variables of importance from a forestry point of view, such as timber stocks and annual increment allocated to tree species, for which there are time series going right back to the first National Forest Inventory of 1923-1929.

The annual felling statistics of the National Forest Inventory contain a measure of statistical uncertainty and involve a degree of systematic underestimation. The felling statistics of the National Board of Forestry for its part are based on timber consumption and changes in inventories. The felling statistics of the National Forest Inventory, however, are necessary in order to allocate felling to ownership categories, methods of felling, tree species etc.

### **Sample size and grossing method**

The National Forest Inventory covers both land and vegetation. Since the first survey in 1923-1929, dead trees have also been recorded provided decomposition of the wood has not progressed beyond suitability for firewood. In 1994 an inventory of all dead timber was introduced.

The main units covered by the survey are areas of forested land and trees growing on it. Dead trees in varying states of decomposition are also included. The main emphasis is on land, which is productive from a forestry point of view, the "forest land". Other types of property bearing trees are also inventoried as regards land and vegetation.

The National Forest Inventory is a spot-sampling inventory. A sample of the stumps, trees, ground vegetation etc. are chosen at random and are used to estimate the total volume of all trees, total area covered with a certain type of vegetation etc.

The samples for the National Forest Inventory consist of random or permanent "tracts" or clusters of sample plots. The sample units, i.e. the tracts, are thus systematically distributed over the entire country. The sample is successively concentrated and is sized in such a way that reliable data can be obtained at county level from five years of material.

The National Forest Inventory uses two different types of tracts. The first type is random and only visited once. The other type is permanent and they are re-inventoried at intervals of 5-10 years. At least a quarter of the plots are permanent.

In the normal instance a tract of sample plots is disposed at equidistant intervals along at the sides of a square. The size of the tract, i.e. the length of the side of the tract, number of sample plots per tract, size of sample plot etc. are scaled so as to provide a day's work for a survey team. This means that a permanent tract consists of eight sample plots and a random tract of 12 sample plots. In total approximately 11 000 sample plots are inventoried each year, of which approximately 6 000 on forest land.

The density and formation of the tracts vary between five regions, which constitute the strata of the survey in the statistical sense, i.e. not reporting areas. The distances between the tracts are shorter in the south of Sweden than in the north. The following factors serve as a guide in the delimitation of the regions:

- Variation of important variables in space
- Size and structure of the counties
- Operational difficulties

In the sample plots all trees are recorded and their diameters measured at chest height. In areas in which felling took place in the previous season, the stumps of felled trees are recorded. A small proportion of the trees are reserved as specimen trees and subjected to more detailed measurements, for example height and height to first live branch and any damage. The specimen trees are used to estimate volume and increment for all the trees. The probability that a tree will be taken as a specimen rises in line with its basal area at chest height (1.3 m above the ground). About 12 000 specimen trees are registered annually. The age of specimen trees in random sample plots is determined by drilling. The drilling cores are sent to the office, where they are aged and the radial increment of the last 60 years is measured under a microscope. In sample plots with forest in the regeneration phase, a selection is made of so-called of main crop plants whose number is recorded. In order to provide reliable data on trends in forest damage and adapt the inventory process to the relevant EU directives, an extra random sample of about 13 000 specimen trees is taken each year for damage observations.

### **Survey response rate**

The statistics of the National Forest Inventory are only marginally affected by non-response. Non-response proper is rare since completeness tests are carried out both during field collection and at later stages. Data from individual sample plots and specimen trees may be lost, but this shortfall is such that the risk of it generating systematic errors is virtually negligible.

### **Sample coverage**

Uncertainty in the statistics of the National Forest Inventory stems primarily from the fact that they are calculated from a sample. The survey is construed in such a way that it provides data of satisfactory certainty for individual counties or large parts of a county with material for five years. The design and coverage of the sample were determined primarily in order to allow estimates of forest land and its timber stocks.

National values for the area of forest land and timber stocks are estimated with a relative mean error of approximately 0.6%. For individual counties the corresponding mean error is greater, between 2 and 12%, and usually somewhat less for area estimation. The other ownership categories usually account for smaller areas than forest land and are estimated with a greater degree of uncertainty. The same applies to data on forest land in the breakdown by ownership categories and age or cutting classes. In certain counties individual ownership categories are poorly represented. In order to avoid the recording of data with a very high degree of uncertainty, ownership categories are sometimes merged in the recording.

Area distributions are always recorded in full, although individual area fractions are subject to considerable uncertainty. Timber stocks and increment require a minimum



sample for recording purposes. Each item of data recorded is based on a minimum of about 20 sample plots.

Annual felling and regeneration factors affect a smaller proportion of the area of forest land. Although the sample has been concentrated for areas affected by these aspects, the estimates have greater uncertainty than the estimates covering all forest land. Total felling in a single year is estimated with a relative mean error of approx. 5%. The recording of annual felling and regeneration factors is therefore carried out with a smaller breakdown compared with the other recording.

The assessments and measurements of the authorised officers are improved on field excursions undertaken following the start of the field work. Information is obtained on possible weaknesses in data collection by continuous monitoring surveys. In this way it has emerged that total timber stocks are underestimated by 1-2% because of the fact that individual trees in the sample plots are not recorded. Annual felling is underestimated by about 5%. One of the effects of heavy brushwood cover is that certain stumps are not measured and, in addition, there is underestimation because of incorrect assessment of the felling date. In the recording in tabular form no correction is normally carried out for these systematic errors. However, estimated felling is adjusted upwards in diagrams showing increment and drain over time for the country as a whole.

### **Imputation method**

None of the statistics recorded from the National Forest Inventory are based on model assumptions. On the other hand, mean error estimates are based on certain model assumptions regarding the variation in space in a number of aspects.

### **Main variables collected**

Variables from different steps and levels are used. For arias variables are specified in classification by strata or group. Some of the most important examples are:

- County/large county districts
- Ownership category
- Type of ownership
- Age classes
- Cutting classes
- Fertility
- Operations performed

In the inventory a large number of variables are collected to classify the units as correct as possible. How fertile different areas are is for example estimated by type of earth, dampness etc.

The statistical measures used are areas and mean values (primarily per hectare) and total values of timber stocks, annual increment and felling for strata and groups. Numbers of trees and plants also arise as statistical measures, for example in the recording of the regeneration situation and damage to trees. Development of timber stocks can be compared from 1920 and the annual growth and felling since 1950. The statistics are published annually, normally as means of five years.

The general level of detail in the breakdown is by county or large county district. Areas and the situation etc. in respect of forest land and forest are recorded for ownership

categories and cutting and age classes. Recording for groups of trees in terms of tree species and diameter classes is normally only carried out for counties or large county districts. Statistics on damage to trees, felling and regeneration status are recorded for larger strata, normally regions or groups of counties. The basic material for these estimates is limited.

Variables at tree level provide a basis for the calculation of timber stocks, increment and felling allocated to tree species and diameter classes, extent of damage to trees and plant occurrence in regeneration areas. Examples of tree-related variables are:

- Tree species
- Living/dead
- Chest-height diameter
- Height
- Five years' diameter increment (measured on drilling cores collected)
- Stump diameter
- Crown thinning and other damage
- Type of plant

Completeness and validity tests on data collected are undertaken at the stage of data collection in the field. Complete tests are carried out at the office. Any errors remaining are corrected by the field teams or at the office. A large number of the variables used in the production of the statistics are of the calculated variable type. Examples are variables, which describe the important tree characteristics volume and increment. To begin with an estimate is carried out with functions for the individual specimen trees. Subsequently a simulation procedure is applied in order to assign values to all trees measured. By a similar procedure volumes are assigned to measured stumps of felled trees.

## **Fishing statistics (2004-2005)**

The statistics are produced by Statistics Sweden on behalf of the National Board of Fisheries, which is the agency responsible for the presentation of statistics. There are three sets of statistics, i.e. “Sea fishing catches for year xx”, “Commercial fresh water fishing in year xx” and “Aquaculture in year xx”.

Data on *catches in marine waters* are obtained from catch receivers authorised by the National Board of Fisheries. See description of “marine fishing catches” below.

*Freshwater fishing* is of considerably less importance, accounting for only approx. SEK 50 million (for 2005). Data are obtained from fishing operators on the major Swedish lakes. Recording is by volumes and sale prices. The statistics are not regulated by the EU but there is a national obligation to supply data (FIFS 2004:25).

*Aquaculture* in principle covers the breeding and cultivation of all species of animals and plants in water according to EEC Regulation No 788/96. For Swedish purposes it covers table fish, shellfish and breeding fish for stocking. All cultures for which the National Board of Fisheries or the county councils have granted a licence are covered by the inquiry. Data are recorded by volumes and sale values. The values are relatively modest in context, sales amounting to just over SEK 150 million (for 2005).

## **Sea fishing catches (2005)**

### **Link to inquiries conducted at European level**

EEC Regulation No 2847/93, Article 9.

The agency responsible for the statistics is the National Board of Fisheries (fishery monitoring department). The statistics are produced by Statistics Sweden.

### **Reporting units**

Catch receivers authorised by the National Board of Fisheries for landings of fish by Swedish fishermen. The data on fish landed directly abroad are based on figures supplied by the Danish and Norwegian fisheries directorates.

### **Periodicity**

Monthly reporting.

### **Results availability**

30 days for monthly statistics, 6 months for annual statistics.

### **Sampling frame**

Full census.

### **Compulsory or voluntary?**

In accordance with the regulations of the National Board of Fisheries on fishery monitoring: Code of Statutes of the National Board of Fisheries, FIFS 2004:25. Data on Swedish fishermen's landings in Denmark are collected by the Danish Board of Fisheries.

### **Main features of survey methodology**

The statistics provide information on returns from commercial sea fishing, on the one hand on catch volumes per sea sector, on the other hand quantities landed and their sale values. Annual statistics have been collected since 1913. Settlement note, in which purchases are noted by the authorised primary receivers who purchase fish, crustaceans or molluscs caught in marine waters directly from fishermen. The catch receivers return a form known as a "Standard Note" or a comparable document. Some catch receivers also supply the material on diskette or by e-mail. The Standard Note is registered, after which the data are scrutinised and corrected, where appropriate after contact with the data provider.

National Board of Fisheries carry out comparisons between landings of catches and catch data according to log book records. They also do reconciliation within the framework of fishing quotas and fishing licensing systems. Producers' organisation of Swedish fishermen does surplus management in accordance with the EU model of lowest and surplus prices

### **Population size**

Approx. 160 authorised catch receivers (1999).

### **Sample size**

Full census. However, catches below 50 kg sold to the same purchaser are not included.

### **Response rate**

No adjustment for non-response. Consequences for the statistics: underestimation of quantities caught and value of these catches.

### **Imputation method**

Certain amendments are made to the data collected using statistics produced by the National Board of Fisheries, which are based on fishermen's logbooks. This generates a weighting supplement of slightly over 5% on the quantities reported. Since the material is used for quota monitoring by the National Board of Fisheries, special requirements are imposed on the quality of the data; hence the primary data collected are subjected to a number of checks and reconciliation.

### **Sample coverage**

The statistics for returns on fishing are intended to include all commercial fishing, while the logbook statistics cover catches of licensed fishermen. A certain trade in fish takes place outside the circles of the data suppliers registered with Statistics Sweden. No indication can be given of its extent.

### **Main variables collected**

Total quantity and total value.

<b>VARIABLE</b>	<b>DESCRIPTION</b>
<b>Note:</b>	
Catch receiver	Enterprise purchasing fish directly from fishermen
Purchase date	Date of purchase of catch
Landing date	Date of landing of catch
Landing port	Place at which catch was landed
Home country	Fisherman's home country
District designation	Fishing vessel's district designation
<b>Lot:</b>	
Type code	Fish species (herring, cod)
Use	Use (table fish, animal feed)
Processing	Processing (ungutted, gutted etc.)
Size	Size class
Freshness	Freshness (fish quality on purchase)
Weight	Weight in kg
Unit price	Price per kg in öre
Value	Weight times price per unit for the lot

## **Industrial goods production (2005)**

### **Link to inquiries conducted at European level**

The statistics have been produced since 1996, in line with EU requirements, in a special inquiry separate from the industry-by-industry statistics. The statistics form part of a coordinated EU inquiry, PRODCOM (Production Statistics in the Community). A goods classification in accordance with the EU Combined Nomenclature (CN), which is also used for the international trade statistics, is used to report the production data. The inquiry is regulated by the EU in accordance with Council Regulation (EEC) No 3924/91 of 19 December 1991 on the establishment of a Community survey of industrial production.

Eurostat produces EU aggregates at PRODCOM level of the production data reported by the Member States. Comparability between the countries is generally good, but there are problems of comparison since definitions are sometimes used which are different or can be interpreted differently.

### **Reporting units**

Reporting units are producing local activity units in industrial enterprises (SNI 10-37) with 20 or more employees. (In some industries all enterprises with 10 or more employees are included in the postal survey).

### **Periodicity**

The statistics on industrial goods production are annual.

### **Results availability**

The first preliminary data are published six months after the close of the reference period. The final results are published 13 months after the close of the reference period.

### **Sampling frame**

The frame for the inquiry is provided by Statistics Sweden's business register. In November (same year as the reference year), a preliminary frame is produced. The frame is delimited in such a way that only activity units with an industry code in SNI 10-37 are included.

### **Compulsory or voluntary?**

Supply of data on industrial goods production is compulsory under the following statutory provisions: Official Statistics Act (SFS 2001: 99), regulation of statistics (SFS 2001:100) and Statistics Sweden SCB's regulation (SCB-FS 2002:28).

### **Main features of survey methodology**

The Industrial goods production statistics (*Industrins varuproduktion*, IVP) are collected by postal survey. The statistics are intended to provide information annually on the distribution of goods in Swedish industrial production. The production of both goods and industrial services is covered by the statistics.

The following are included in industrial services:

- Repairs and maintenance for third parties
- Assembly and installation in site for third parties
- Other processing of products, e.g. bleaching, dyeing, grinding, printing, gilding, etching, painting and varnishing.

The statistics must provide a high level of detail and indicate quantities produced during the year and their market value. Because of the lack of scope for respondents to report production values, data are collected on products sold during the year, i.e. also products manufactured prior to the reference year in question. Reporting for periods, which do not coincide with a calendar year, a “split” accounting year is accepted.

For recording at detailed goods level, respondent enterprises report according to the Combined Nomenclature (CN) used in the EU trade statistics. In order to satisfy the PRODCOM requirements, all codes can be aggregated to the PRODCOM list of products. For national purposes, subdivisions have been introduced to the eight-digit code in accordance with the CN for goods and supplements to the industrial services contained in the PRODCOM list.

Data must in principle refer to the calendar year. A number of establishments, however, have an accounting year, which covers a different period. This is accepted in the statistics.

### **Population size**

The population for the postal survey consists of producing local activity units in industrial enterprises (SNI 10-37) with twenty or more employees. (In some industries all enterprises with 10 or more employees are included in the postal survey). The number of units in the population is approx. 4 000.

For enterprises with 0-19 employee's data are obtained from the Standardised accounting statements (SRU) of the Tax Agency since 2003.

### **Sample size**

The cut-off is the number of employees. Enterprises with at least 20 employees are included in the sample. Hence this means a full census for enterprises with at least 20 employees. Industrial establishments with a total of over 20 employees in service enterprises are also included in the inquiry. Sampling errors do not arise.

For multi-establishment enterprises data are collected per local activity unit. For certain enterprises combined reporting is accepted for several local activity units. Reporting is by an internal check number, which must in principle represent a single local activity unit.

For enterprises with 0-19 employee's data are obtained from the Standardised accounting statements of the Tax Agency. With the aid of various models, goods production can then be estimated in order to be included in the total recording of industrial goods production. As of the 1999 inquiry the method used to extrapolate goods production for industrial enterprises with less than 20 employees was changed somewhat with the effect that estimated goods production is slightly lower. The difference is marginal, however, and is due to the fact that a small proportion of the turnover of these enterprises consists of trade and not industrial activity.

To reduce the time enterprises have to spend on supplying data some enterprises are only asked every second year. The production of these enterprises is based on models containing data from Standardised accounting statements of the Tax Agency and data supplied last year.

**Survey response rate**

Unweighted non-response is approx. 6% and weighted non-response is approx. 1% (weights based on the value of different enterprise's production).

**Grossing method**

Data for industrial enterprises with 0-19 employees are based on models/assumptions in which goods production is estimated from data on sales. The estimate is based on data reported to Statistics Sweden by enterprises with more than 20 employees. By this means it is possible to create "representative goods".

**Sample coverage**

Data not covered by SAMU (coordinated samples) are filled in with the aid of annual frames. In this way no sample coverage errors arise.

The Industrial goods production statistics taking in enterprises with 20 or more employees provide information on Swedish goods production with near-complete, though not absolutely complete coverage. For smaller enterprises completeness is poorer since these are not surveyed by questionnaire but are covered by register data and model estimates. The survey does not include enterprises with fewer than 20 employees (there are certain exceptions, see above), which means certain under-coverage. Processing with annual frames and SRU material compensates for this under-coverage.

**Main variables collected**

Sales values and quantities (totals produced and delivered) per type of goods. Income from trade and other activities per industry.

Around 10 500 more goods types are recorded in accordance with the Combined Nomenclature (CN) plus about 700 industrial services based on the PRODCOM list.

A total of approx. 2 400 codes of products and industrial services are recorded in Sweden accordance with the PRODCOM list (there are 4 500 PRODCOM codes).



## **Annual energy statistics for electricity, gas and district heating (2005)**

### **Link to inquiries conducted at European level**

EEC Regulation No 2004/8/EC.

The agency responsible for the statistics is the Swedish Energy Agency.

The statistics are produced by Statistics Sweden.

### **Reporting units**

Enterprises with the following activity:

- Transmission of electricity.
- Sale of electricity.
- Production of electricity. The power source must be at least 100 kW. For own use only, the limit is 400 kW.
- Heat production.
- District heat distribution.
- Production and distribution of town gas, distribution of natural gas.

Power stations, combined heat and power plants, and non-integrated heat generating plants, which are included in the above-mentioned enterprises.

### **Periodicity**

The inquiry is annual. It covers a full calendar year, also in those cases in which the calendar year is split.

### **Results availability**

The preliminary data are published nine months after the close of the reference period.

The final results are published 14 months after the close of the reference period.

### **Sampling frame**

Full census.

### **Compulsory or voluntary?**

Supply of data annual energy statistics for electricity, gas and district heating is compulsory under the following statutory provisions: Official Statistics Act (SFS 2001:99) and Swedish Energy Agency's regulation (STEMFS 2007:1).

### **Main features of survey methodology**

The statistics provide information on the supply and use of electricity, gas and district heating, costs and income, fuel consumption and technical equipment at power stations etc. Data are collected by postal surveys, mainly with the use of electronic forms. The inquiry, amongst other things, counts totals for variables relating to supply, use, costs, income, employment etc. Mean values: electricity transmitted per subscription and average prices for electricity and grid service.

### **Population size**

The population contains of:

- Approx. 1 100 enterprises (whereof 200 grid companies and 900 others)
- Approx. 1 500 power stations and heat generating plants (special data).
- 8 gasworks and natural gas distributors

**Sample size**

Full census.

**Survey response rate**

Non-response arises at both unit level and in data reporting. The non-response is limited to approx. 100 smaller enterprises.

**Imputation method**

Collected data undergo scrutiny and, where appropriate, correction on registration. In the case of obvious errors the respondent is contacted for verification/amendment. The data are checked automatically in conjunction with the transfer of data to Statistics Sweden's production system. A macro-check is performed prior to publication. Electricity production can be reconciled with the monthly electricity statistics. Fuel consumption in electricity and heat production can be reconciled with the quarterly fuel statistics.

Agreement is good.

**Grossing method**

Full census.

**Sample coverage**

Full census. Over and under-coverage arise to a very insignificant extent. Extensive structural changes, however, have increased the risk of both under-coverage and over-coverage.

**Main variables collected**

The statistical targets covered by the inquiry can be grouped into three categories for the production and consumption of *electricity*, *district heating* and *gas*. Overall electricity production and technical equipment are recorded broken down by the industrial classification of the enterprises and by power station type. Transmitted electricity is recorded county-by-county for the consumer categories: industry, individual houses, multiple-occupancy buildings and total. Other variables are recorded at national level.

*Power stations*: data on technical equipment, gross production and own consumption of electricity and fuel consumption (quantity and value).

*Heat generating plants*: data on production and turnover for heat, consumption of electricity and fuels (quantity and values).

*Enterprises included in the population (se above)*: sale (quantity and value allocated to the various sectors), other operating income/costs and employment. Grid companies must also indicate electricity transmitted broken down by different consumer categories and, where appropriate, different municipalities.

## **Financial corporations except insurance companies - Financial enterprises, annual financial data (2005)**

### **Link to inquiries conducted at European level**

There is no EU regulation.

The agency responsible for the statistics is the Financial Supervisory Authority.

The statistics are produced by Statistics Sweden.

### **Reporting units**

The inquiry covers institutions listed in the inspection register of the Financial Supervisory Authority. In addition to these, investment corporations and mutual funds are also covered by the inquiry. Units recorded are:

- 1) Credit institutions and securities brokerage companies according to the definition in Chapter 1 of the Act (1995:1559) on annual reports in credit institutions and mutual funds
- 2) Subsidiaries of Swedish credit institutions abroad
- 3) Groups in which a credit institution or a mutual fund is the parent company
- 4) Groups in which a financial holding corporation in accordance with the definition in Chapter 1 of the Act (1995:1559) on annual reports in credit institutions and mutual funds is the parent company
- 5) Foreign-owned banking subsidiaries
- 6) Mutual funds
- 7) Investment corporations.

### **Periodicity**

Annual.

### **Results availability**

The questionnaire with preliminary results is available about four months after the close of the year and the final results nine months after the close of the year. Since 2004 there is no special publication for these statistics. They are published in Statistics Sweden's statistical database and financial enterprises, annual financial data.

### **Sampling frame**

The sampling frame used in the inquiry is the Financial Supervisory Authority's register of financial corporations supplemented by investment corporations from Statistics Sweden's Business register.

### **Compulsory or voluntary?**

The inquiry and supply of data is compulsory under the statutory provision FFFS 2004:18 for the Financial Supervisory Authority on annual and quarterly financial statements.

### **Main features of survey methodology**

The statistical source for the annual production calculations for financial services, excluding ancillary services and insurance services, are the annual accounts statistics collected by Statistics Sweden. The questionnaire is drawn up by the Financial Supervisory Authority, and all financial corporations under supervision are to be covered by the inquiry. Reporting takes place with profit and loss account and balance sheet data set out separately for banks, credit market corporations, securities brokerage companies and mutual funds. In addition the statistics also covers investment corporations, which are

not subject to supervision. The purpose of the statistics is to provide information on the financial position of the institutions and the results of their activity in different areas in accordance with their annual accounts.

The inquiry is a full census and the data are collected via the so-called annual overview which is sent out to the institutions at the end of each year. The contents of the inquiry are based on the Annual Reports Act for credit institutions and securities brokerage companies (1195:1559) and statutory provisions of the Financial Supervisory Authority (FFFS 2005:33, FFFS 2004:20 and FFFS 2000:22) for annual overviews for credit institutions and securities brokerage companies.

For investment corporations there is a special form which is based on the Annual Reports Act, and for mutual funds a simplified form is used for certain profit and loss account data (based on the FFFS 2004:20).

Incoming data are registered and scrutinised and contact is made where necessary with the respondent.

Statistics Sweden's programme for the financial market has a programme council to assist the development of the financial market statistics. The members are representatives of the Financial Supervisory Authority, the National Institute of Economic Research (*Konjunkturinstitutet*, KI), the Swedish Central Bank, the research community, the Swedish Bankers Association and the market.

### **Population size**

The data from 2005 give the population size:

Approx. 430 units in recording category 1-5 according to the standard inquiry and also 620 mutual funds and 20 investment corporations.

### **Survey response rate**

There is in principle no non-response.

### **Main variables collected**

The main variables requested in the inquiry are:

#### **PROFIT AND LOSS**

##### **ACCOUNT**

Interest income

Leasing income

Interest costs

Dividends received

Commission income

Commission costs

Net result of financial transactions

Other operating income

Total operating income

General administration costs

Writing-off and writing-down of tangible and intangible fixed assets

Other operating costs

Total costs before credit losses

Result before credit losses  
Credit losses net  
Change in value on acquisition of property  
Writing-down of financial assets  
Writing-back of financial assets  
Operating result  
Extraordinary income  
Extraordinary costs  
Appropriations  
Taxes  
Result for the year

## BALANCE SHEET

### ASSETS

Cash and credit with central banks  
Government debt instruments eligible to serve as security  
Loans to the public  
Bonds and other interest-bearing securities  
Shareholdings (not included in the next two rows)  
Shareholdings in associated companies  
Shareholdings in affiliated companies  
Intangible assets  
Tangible assets  
Other assets  
Prepaid expenses and accrued income  
Total assets

### DEBTS, PROVISIONS AND SHAREHOLDERS' EQUITY

Debts to credit institutions  
Deposits and borrowings from the public  
Securities issued etc.  
Other debts  
Costs accrued and prepaid income  
Provisions  
Subordinate debts  
Untaxed reserves  
Result for the year  
Total debts, provisions and shareholders' equity

Profit and loss accounts relate to the calendar year and balance sheets relate to the position at 31 December, with the exception of institutions applying a split accounting year. Such institutions report data for the last accounting year ending before that date.

## **Financial corporations except insurance companies - Financial institutions, assets and liabilities (2005)**

### **Link to inquiries conducted at European level**

Council Regulation (EC) No 2533/98 of 23 November 1998 - concerning the collection of statistical information by the European Central Bank.

The agency responsible for the statistics is the Financial Supervisory Authority.  
The statistics are produced by Statistics Sweden.

### **Reporting units**

#### **Periodicity**

By month and by quarter.

#### **Results availability**

The statistics on financial institutions, assets and liabilities is available 19 bank days after the turn of the month.

#### **Sampling frame and population size**

The statistics covers all institutions listed in the inspection register of the Financial Supervisory Authority. And in addition subsidiaries of Swedish credit institutions abroad, foreign-owned banking subsidiaries and mortgage institutions are also included.

#### **Compulsory or voluntary?**

The supply of data is compulsory under the Central Bank Act (1988:1385), chapter 6, 9§

#### **Main features of survey methodology**

The statistics by month and by quarter shows the size and changes in the assets and debts of the financial institutions. It also shows the financial flows between the financial institutions within the sector and also between the financial sector and other sectors (including foreign countries).

In the database Financial institutions there are three groups of institutes: commercial banks, housing finance institutions and financial institutions.

The main form for the statistics is collected monthly with the exception of the smallest institutions, which together have a balance sheet total amounting to a maximum of 5 percent of the balance sheet total of all the institutions that are obligated to provide data. These institutions submit the questionnaire on a quarterly basis. For these institutions, the balance value is imputed for the in-between months from the previous quarter. This means that the months January, February, April, May, July, August, October and November are calculated as if no further financial events have occurred for these institutions. The 5 percent group's share of the total balance sheet is however so small that this estimation is not considered to significantly changing the results of the survey.  
The statistics are quick statistics, which means that Statistics Sweden can revise values afterwards. The statistics do not contain any balance sheet allocations, which means that the data are not completely comparable with the statistics based on data submitted after the accounts are balanced.

Consistency and time series checks are carried out in each questionnaire. In some cases, checks are also made of the reasonableness of the responses and against other questionnaires. Checks are also carried out on the delivered statistics. Data providers are contacted where necessary. Obvious errors such as a large sum being placed in the wrong row in the questionnaire are usually detected during such checks.

**Sample size and sample coverage**

Full census.

**Survey response rate**

Full census with negligible drop-out.

**Method used for to impute for missing data and variable used for grossing up to the population**

For the small institutions, the balance value is imputed for the in-between months from the previous quarter. This means that the months January, February, April, May, July, August, October and November are calculated as if no further financial events have occurred for these institutions.

The same method is used for missing data.

**Main variables collected**

Assets and debts in Swedish crowns (SEK) respectively foreign currencies.

The totals are divided and analysed for respondents and type of financial object (for example loans, certificates, bonds etc.).

## **Insurance companies, annual financial data (2005)**

### **Link to inquiries conducted at European level**

EU regulation exists; the legislation applicable is: Directive 91/674/EEC and Regulations (EC) 1225/1999, 1226/1999, 1227/1999. There are possibilities for international comparison. The statistics are produced by the Financial Supervisory Authority.

### **Reporting units**

Units are grouped by type of enterprise: national Swedish non-life and life insurance companies (including unit link companies) and larger local non-life insurance companies (with a balance sheet total over 1 000 base amounts two years in a row). PPM (premium pension funds) are not included in the compilation of data.

### **Periodicity**

Annual.

### **Results availability**

The data are published eight months after the close of the year.

### **Sampling frame**

The sampling frame used is the inspection register of the Financial Supervisory Authority. The smaller larger local non-life insurance companies, not included, amount to less than 0.5 percent of the balance sheet total.

### **Compulsory or voluntary?**

Supply of data is compulsory under Chapter 19, Section 3, of the Insurance Business Act (1982:713) , Section 49 of the Insurance Business Ordinance (1982:790), the Regulations on annual reports of insurance corporations (FFFS 2005:17) and the Regulations on the obligation of Swedish life insurance companies' obligation the supply annual data (FFFS 2005:21).

### **Main features of survey methodology**

The statistics cover insurance companies and pension institutions, excluding pension foundation and benevolent societies. PPM (premium pension funds) are not included in the compilation of data. Individual pension savings (IPS) are not included in these statistics and are published as part of Financial Market Statistics.

The data are based on the companies' annual reports. The statistics contain mainly data on the companies' profit and loss accounts and balance sheets, both at institution level and at overall level. The profit and loss account records are also broken down by branches of insurance.

Consistency and time series checks are carried out in each questionnaire. In some cases, checks are also made of the reasonableness of the responses and against other questionnaires. Checks are also carried out on the delivered statistics. Data providers are contacted where necessary. Obvious errors such as a large sum being placed in the wrong row in the questionnaire are usually detected during such checks.



**Population size**

During 2006 there were 42 life insurance companies (of which 11 were fund insurance companies) and 88 non-life insurance companies (national companies). There were 39 larger local companies for non-life insurance (with a balance sheet total over 1 000 base amounts two years in a row).

**Sample size**

The inquiry is a full census and has a very high level of reliability.

**Survey response rate**

The companies recorded comprise 100% of the institutions listed above. The data are used in the supervisory activities of the Financial Supervisory Authority. The data are scrutinised by auditors.

**Main variables collected**

Profit and loss account and balance sheet data for groups of insurance companies. For each branch of insurance there is information on premium income, capital yield, unrealised gains and losses, insurance settlements, bonuses and rebates, operating costs etc.

Examples of variables presented are premium incomes, compensatory payments, allocations to reserves etc.

## **Riksbank's (Sweden's central bank's) Financial Market Statistics (2003)**

### **Link to inquiries conducted at European level**

Financial market statistics (FMR) regarding monetary financial institutions are regulated by Council Regulation (EC) No 2533/98 of 23 November 1998 - concerning the collection of statistical information by the European Central Bank (ECB). This is specified in more detail in the guidelines ECB 2003/2 and in the regulation concerning the consolidated balance sheets of the monetary financial institutions sector ECB 2001/13.

The agency responsible for the statistics is the Riksbank (Sweden's central bank). The statistics are produced by Statistics Sweden, Unit for Financial Market Statistics.

### **Reporting units**

Data on *lending from housing credit institutions* have been collected by the Riksbank from 1989 until March 2003 when Statistics Sweden took over on behalf of the Riksbank.

Data on *certificates programmes* on the Swedish market have been collected since December 1985, and the issuing of bonds and debenture loans since January 1996. As of March 2003, Statistics Sweden took over on behalf of the Riksbank.

*Data on individual pension savings (RIPS)* have been collected since 1994 and are regulated in the Individual Pension Savings Act (1993:931). RIPS is a long-term savings with the right to tax deductions. The statistics have been produced by the Riksbank until the reporting in March 2003 when Statistics Sweden took over on behalf of the Riksbank.

Certain time series in the reporting of *foreign assets and liabilities (RUTS)* have been collected from banks since 1978. The statistics were developed during the 1980s with breakdown by countries and currencies. These statistics have been produced by the Riksbank until the reporting for March 2003 when Statistics Sweden took over on behalf of the Riksbank.

*Derivatives statistics* are collected every six months from the four large banks on a consolidated level, i.e. including subsidiaries and branches abroad, on behalf of the BIS.

In addition to the above, Statistics Sweden collects some data from or via the following sources:

- Data on the Swedish national debt are collected from the National Debt Office.
- The Riksbank's assets and liabilities are collected from the Riksbank, as well as data on the spot exchange flows at the end of the month. The foreign holdings of treasury bills are also collected from the Riksbank.
- From Statistics Sweden, the total placements of life insurance companies, AP funds and the Premium Pension Authority in money market instruments issued by the Swedish government in total currency are collected. A total figure regarding bonds on the Swedish market issued by non-financial corporations and investment companies and the total issued bonds from local governments are also taken from this source.
- Some balance and results items are taken from the Financial Supervisory Authority, such as income from interest rates and credit losses for MFI in total.

### **Periodicity**

The reference time for the balance values is the last calendar day in the month, quarter or six-month period. The reference time for the change value is the entire period from the previous to the current reference time.

### **Results availability**

Derivatives statistics are collected every six months and should be received by Statistics Sweden roughly 45 days after the end of December and end of June. The production time at Statistics Sweden is generally between eight to ten work days. A smaller number of statistical deliveries have a longer production time of around 20 work days.

The monthly balance and issue statistics should be received by the ECB at the latest on the 17th bank day after the end of the reference period. Other deliveries and publication on Statistics Sweden's website take place on the 19th bank day after the end of the reference period.

Quarterly data regarding balance statistics should be received by the ECB at the latest on the 28th bank day after the end of the reference period.

### **Sampling frame and population size**

The product FMR has a number of populations. The populations largely overlap each other but there are some differences. The main populations are MFIs, RUTS and RIPS but all the populations are presented in more detail below. Totally the population contains of around 270 institutions.

The MFI population consists of Swedish<sup>3</sup> *monetary financial institutions (MFI)* and their branches abroad. MFIs are defined as financial enterprises whose business it is to receive deposits and/or close substitutes for deposits from parties other than monetary financial institutions, and to grant credits or invest in securities on their own account. The following are considered MFIs: central banks (sector<sup>4</sup> 211), banks (sector 212), banking branches of foreign banks (sector 213), housing credit institutions (sector 214), other monetary credit market companies (sector 215), monetary mutual funds (sector 216), monetary securities brokerage companies and investment firms (sector 217) and other monetary financial institutions (sector 219).

Only a limited amount of data were collected during 2003 from the Riksbank (sector 211) as, at this time, Statistics Sweden had not yet taken over the collection of balance sheet statistics regarding the Riksbank. Therefore, unless specifically noted otherwise, the MFI population refers here to MFI excluding the Riksbank<sup>5</sup>. During 2003, no data were collected from monetary mutual funds despite the fact that these belong to the MFI population. This was primarily because this sector constitutes such a small part of the total MFI that the difference between collecting data or not is negligible<sup>6</sup>.

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<sup>3</sup> Swedish means that the institution is operating within Sweden's borders.

<sup>4</sup> The sector divisions are according to INSEKT 2000, the Standard Classification by Institutional Sector, 2000.

<sup>5</sup> That which is here called MFI refers therefore primarily to that which is usually called OMFI (Other Monetary Financial Institutions), i.e. MFI excluding the central bank.

<sup>6</sup> This assessment is based on the quarterly collection of investment fund data by the Financial Supervisory Authority

The Riksbank provides a list of the institutions which are considered part of the MFI population.

The *RIPS* population includes all institutions which have special permission from the Financial Supervisory Authority for carrying out pension savings operations (IPS) in Sweden. The Financial Supervisory Authority compiles a list of all institutions with such permission and forwards this to Statistics Sweden.

The population for *issue statistics* consists of all MFI institutions which have permission from the Financial Supervisory Authority to issue securities on the Swedish market on their own or others' account. Data on permits is available on the website of the Financial Supervisory Authority.

The population for *borrowing specifications* (6099) consists of the MFI institutions which according to the articles of association have the main task of financing housing (i.e. housing credit institutions, sector 214 above).

The *RUTS* population consists of Swedish-owned banks (including subsidiaries and branches operating abroad) and foreign-owned banks operating in Sweden with considerable activity with other countries. The RUTS population is established on the basis of the institutions in sector 212 "Banks (excluding central banks)" and their branches abroad and sector 213 "Banking branches of foreign banks" with considerable activity with foreign countries. The population is reviewed once a year regarding the status on 30 September.

The population for *OTC derivatives* is made up of the largest domestically-owned institutions on the derivatives market, which in Sweden consists of the four Swedish-owned large banks. Reporting is made on a consolidated level, i.e. including subsidiaries and branches abroad.

Each institution (including branches to banks abroad) is a legal entity with the exception of the monetary mutual funds which are considered a tax object.

Balance and issue statistics are reported on a monthly basis. The statistics are based on data taken from the MFI form regulated by the Riksbank's statutes RBFS 2001:2 until November 2003 and RBFS 2003:2 from December 2003 onwards, while issue reports and lending specifications are regulated in RBFS 1997:5. The MFI form is submitted on a monthly basis by the institutions which together have a balance sheet total amounting to 95 percent of the balance sheet total of all institutions which are obligated to report. The other institutions instead provide a statistical report for every quarter which Statistics Sweden uses as a basis for imputations in the in-between months. The delimitation of the 95 percent (monthly) and 5 percent (quarterly) is made for every calendar year, based on the circumstances on 30 September of the previous year.

RIPS and RUTS statistics are reported on a quarterly basis. RIPS is reported by pension savings institutions, i.e. institutions which have permission from the Financial Supervisory Authority to carry out pension savings operations, such as banks, securities companies, companies with permission to carry out securities operations and foreign securities companies with branches in Sweden. RUTS are reported by Swedish-owned banks (including subsidiaries and branches operating abroad) and foreign-owned banks operating in Sweden with considerable activity with other countries. The RUTS

population is reviewed in September every year. The reporting of RIPS and RUTS is regulated by RBFS 1997:5.

### **Compulsory or voluntary?**

There is an obligation to report information according to Chapter 6 §9 of the Sveriges Riksbank Act (1988:1385).

### **Main features of survey methodology**

The Riksbank has for a long time produced statistics on Swedish monetary financial institutions (MFI) and the financial markets, called financial market statistics. Data are collected primarily on a monthly basis. Some data are only collected quarterly or every six months.

The statistics provide a picture of the overall structure of

- MFIs' assets and liabilities
- the development of the money supply and credit flows (deposits and lending)
- the securities market
- country and currency distribution of foreign assets and liabilities
- OTC derivatives

All statistics are collected electronically via the FMR system. The statistics are quick statistics, which means that Statistics Sweden can revise values afterwards. The statistics do not contain any balance sheet allocations, which means that the data are not completely comparable with the statistics based on data submitted after the accounts are balanced.

The statistics are primarily presented on the basis of a balance sheet structure containing assets and liabilities, which are broken down into more or less detailed levels and counterparts. Furthermore, individual pension savings, the derivatives market, foreign assets and liabilities and the securities market are reported separately.

Part (in many cases the same as the reporting institution) are presented either using the whole population as one group or as one or several particularly interesting institution groups within the population, such as banks, housing credit institutions and finance companies. Regarding the MFI population, the statistics are presented either including or excluding the Swedish institutions' branches abroad, depending on the statistical delivery.

The counterparts are divided up per country or country group and per institutional sector/sub-sector. The divisions follow INSEKT, with the difference that the foreign counterparts are specified into different sectors. The usual country breakdown is Sweden, EMU countries, other EU countries and rest of the world. The usual sector breakdown is MFI with sub-sectors and Swedish general public<sup>7</sup> in which households and non-financial corporations are included for example.

Deposits and lending are two very central items in the statistics and, for example, lending to Swedish households can be mentioned as one of the most important study domains.

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<sup>7</sup> Swedish general public consists of the sectors Local governments, the Government excluding the National Debt Office, Non-monetary securities funds, Financial auxiliaries, Non-profit institutions serving financial corporations, Investment companies, Non-monetary credit companies, Other financial institutions, the Non-financial corporate sector and Households and Non-profit institutions serving households.

Lending to households is presented as stock data at the end of the respective month. Specified parts being banks, housing credit institutions and finance companies.

The money supply (M0 and M3) are also very central reporting measures. M0 is defined as the general public's holdings of notes and coins (Swedish kronor) and is calculated based on the Riksbank's total amount of notes and coins in circulation minus the banks' holdings of notes and coins. M3 is defined as the general public's holdings of notes and coins (M0), the Swedish general public's deposits in banks (all fixation periods excluding IPS and in all currencies) and the Swedish general public's holdings in certificates of deposit, denominated in Swedish kronor. Bank deposits from the Swedish general public are presented specified into households, non-financial corporations and other. Certificates of deposit are also presented separately.

Consistency and time series checks are carried out in each questionnaire. In some cases, checks are also made of the reasonableness of the responses and against other questionnaires. Checks are also carried out on the delivered statistics. Data providers are contacted where necessary. Obvious errors such as a large sum being placed in the wrong row in the questionnaire are usually detected during such checks. However, errors due to the data provider misunderstanding what data should be reported under each item may not be detected.

Deliveries of statistics to the ECB and BIS are also checked with regard to time series, consistency and reasonableness by the recipient and this is communicated back to Statistics Sweden.

These statistics do not include balance sheet allocations. They are therefore not completely comparable with other statistics based on balance sheets, such as financial enterprises, annual accounting (FM0402).

### **Sample size, sample coverage and survey response rate**

The coverage is very nearly total. There is a slight risk for undercoverage for newly-established institutions and foreign affiliates that have not started reporting at the first reporting time. It could alternatively be the case that the Swedish parent company has not informed Statistics Sweden that new branches or subsidiaries have been started abroad.

The main form for the statistics, the MFI questionnaire, is collected monthly with the exception of the smallest institutions, which together have a balance sheet total amounting to a maximum of 5 percent of the balance sheet total of all the institutions that are obligated to provide data. These institutions submit the questionnaire on a quarterly basis.

When the first round of results is delivered to customers, non-response can amount to 1-3 institutions of a total of around 270 institutions. These usually submit data within a month or so.

The statistics consist of a number of total surveys, which means that sample errors do not occur. However, it is very difficult to know whether all data are correctly filled in, despite several checks being carried out. For example, a submitted balance sheet can appear correct even if the figures reported are not correctly filled in. This is also the case for gross changes during the period, etc. To minimise reporting errors, the Riksbank's regulations and general guidelines (RBFS) and supplementary instructions for each form

have been developed in consultation with the reporting institutions. Questionnaires and instructions are continuously adapted to capture institutional changes and changes in the study domains. This work is also carried out in consultation with the reporting institutions.

### **Method used for to impute for missing data and variable used for grossing up to the population**

When the first round of results is delivered to customers, non-response can amount to 1-3 institutions of a total of around 270 institutions. These usually submit data within a month or so. In cases where an institution does not submit the MFI report in time for delivery, the balance value is imputed from the previous month or quarter. This is the same as if no further financial events have occurred. For any non-response of other questionnaires, no non-response measures are taken. In conclusion, object non-response is considered to be negligible, as it is far too small to affect the results.

The partial non-response is not known. A submitted balance sheet always matches but it is still not possible to know whether the distribution of items has been correctly done. In certain cases, it is suspected that a large value has been placed under only a few items, for example the item "Other", instead of being specified into the various financial objects.

The main form for the statistics, the MFI questionnaire, is collected monthly with the exception of the smallest institutions, which together have a balance sheet total amounting to a maximum of 5 percent of the balance sheet total of all the institutions that are obligated to provide data. These institutions submit the questionnaire on a quarterly basis. For these institutions, the balance value is imputed for the in-between months from the previous quarter. This means that the months January, February, April, May, July, August, October and November are calculated as if no further financial events have occurred for these institutions. The 5 percent group's share of the total balance sheet is however so small that this estimation is not considered to significantly changing the results of the survey.

From December 2003 onwards, data on lending to the counterpart sector households by purpose have been compiled and delivered. However this variable is not collected. The purpose is instead approximated based on which collateral the loan has in combination with the sectors that the lender and the counterpart belong to.

### **Main variables collected**

All statistical data which an institution should report to Statistics Sweden are identified using 14 dimension variables:

1. Account : (balance value or changes)
2. Account type : (states page on balance sheet)
3. Account item : ( states type of asset or liability)
4. Duration (type of time-related conditions)
5. Purpose: (for lending and deposits and shares)
6. Collateral (underlying asset)
7. Country (where counterpart is located)
8. Counterpart (type of sector of other party)
9. Currency

10. Valuation (valuation type for object)
11. Sort (unit such as number, sum in kronor or such like)
12. Data provider
13. Year
14. Period

Every dimension variable has a value set with at least two actual values (members). The dimension variables 1-11 can also contain the value "X" which means "not specified". Today around 40 000 combinations of the above variables are collected, but in theory, more combinations are possible. In the forms submitted by the data providers, the variable code is not visible; they fill in cells based on named columns and rows.



## **11.2 Statistical surveys and other data sources used for the income approach**

### **Total payroll statistics based on the income statement register (2005)**

#### **Link to inquiries conducted at European level**

There is no EU regulation directly affecting statistics from the income statement register (*kontrolluppgiftsregistret*, KU-register). The statistics are produced by Statistics Sweden.

#### **Reporting units**

The statistics from the income statement register are based on administrative material regulated in the tax legislation.

#### **Periodicity**

Calendar year.

#### **Results availability**

The income statement register and the payroll statistics per establishment is produced and published annually. A preliminary version is brought out in April and the final version in October of the year after the income year.

#### **Sampling frame**

Full census. The income statement data are generated pursuant to the obligation to provide statements under the tax legislation. Incomes not recorded in accordance with this obligation are not covered.

#### **Compulsory or voluntary?**

Income statements have to be supplied for any person who has received a wage or salary, fee, other compensation or benefit which constitutes taxable income from employment as referred to in the Tax Returns and Income Statements Act (2001:1227). The obligation to indicate establishment identification numbers on income statements is regulated by the Act concerning Establishment of Numbers and Related Matters (1995:609). The establishment number indication is used only by Statistics Sweden, not by the Tax Agency.

#### **Main features of survey methodology**

The KU register is used as a basis for the production of payroll statistics and statistics on amounts of social compensation paid. As the data are produced from full census material, recording for small groups, e.g. municipalities, is possible. Recording can also be undertaken according to sectors and industries. Total payroll can be calculated on the basis of both the municipality of residence and the municipality of the establishment.

Recording is undertaken according to

- Sector initiating payment
- Industry
- Compensation code
- County of the working site
- Sex

Since the payroll statistics are essentially registered at the level of the individual, many other recording groups can be specified.

The income statement statistics have a dual purpose: direct use and indirect use for other statistical products.

The purpose of direct use is, on the one hand, to provide a picture of the distribution of taxable wages and salaries and social contributions and, on the other hand, to exploit the statistics on employers' payroll totals for economic evaluation and planning. The purpose of indirect use is to draw upon the register in order to supplement the variable content of a number of statistical products within Statistics Sweden (income statistics, the standard of living inquiry, the national accounts and regional accounts).

The KU register is the main source for the production of the annual regional employment statistics by reason of the facilities it offers for linking together individual data with enterprise data by way of an individual's personal identification number and the corporate identification number/establishment number of the enterprise. The direct use of the KU register exploits the possibilities of the register for the recording of amounts of taxable income and transfers to individuals. These statistics are used extensively by the national accounts statistics and the regional accounts and by local authorities in order to calculate their tax base by way of the total payroll statistics.

### **Population size**

The total population for the 2005 KU register consists of all income statements from employers and income statements covering payments from public or private insurance schemes. The total number of income statements are about 7 700 000.

### **Survey response rate**

Full census.

### **Imputation method**

Various processing routines are applied, amongst others plausibility checks of amount fields. The small number of income statements carrying implausible amounts is removed. This is not thought to affect the reliability of the statistics overall. No changes are made to the original income statements, since the main responsibility for the register rests with the Tax Agency. After the first preliminary version has been produced, supplementing work is carried out by Statistics Sweden. Multiple-establishment enterprises, which have not entered an establishment identification number on the income statement, receive a questionnaire in which they are asked to fill in the missing establishment number. This is done in order to facilitate the linking of establishments with persons for those persons who received income statements.

### **Sample coverage**

Full census. The reliability of the statistics depends on whether the income statement data are correct and whether Statistics Sweden receives all the income statements, which are supplied to the Tax Agency. With regard to the correctness of the data it can be said that reliance is usually on the employers' wage and salary accounting systems and personnel records, which form an important basis for the income assessment and taxation of employees. It is thus possible to assume that the data are checked by the employer before they are presented to the income recipient and recorded by the Tax Agency.

**Main variables collected**

The basis for the variables in the KU register is formed by the income statements (KU), which Statistics Sweden receives from the SKV. These can be viewed as falling into two categories:

- Income statements from employers
- Income statements from entities initiating social compensation payments.

The register of income statements from employers contains data supplied by KU10 (income statement from an employer), KU13 (income statement – special income record for persons resident abroad), KU14 (special income record – ATP [National Supplementary Pensions Scheme] and income statement) and KU16 (income statement for seafaring income). The data include personal identification number, corporate and establishment identification numbers, gross cash pay, preliminary “A” tax, various benefits and compensations etc. These variables are then supplemented with data on the institutional sector code of the enterprise making the payment and the industry of the enterprise and establishment from the Business database (FDB). The data are also summed for enterprises and establishments.

The register of income statements from institutions initiating taxable social compensation payments contains the data presented on KU18 (income statement from institutions initiating pension and insurance payments). The main variables in this case are personal identification number, amount, preliminary “A” tax and compensation code (indicates what type of compensation is applicable).

The payroll statistics are recorded in SEK.

## Descriptions of various statistical inquiries relating to persons employed

The number of persons employed is investigated in a number of different inquiries

- The Labour Force Survey (LFS)
- Short-term employment statistics (*Kortperiodisk sysselsättningsstatistik*, KS)
- Register-based labour market statistics (*Registerbaserad arbetsmarknadsstatistik*, RAMS)
- Structural business statistics (SBS) for industry, construction and the service sector, including Standardised accounting statements (SRU)
- Statistics Sweden's Business database, FDB

Inquiry	Num-ber	No of hours	Inquiry on individuals	Enterprise inquiry	Sample	Full census
LFS	X	X	15-74 yrs		X	
KS	X			X	X	
RAMS	X		16-84 yrs			X
SBS	X	X		X		X
FDB	X			X		X

A short description of the various inquiries is given below.

## Labour force survey (2007)

### Link to inquiries conducted at European level

EU Regulation No 430/2005 specifies the requirements in respect of both content and representativeness for the adaptation of the Labour Force Survey (*Arbetskraftsundersökningar*, AKU) to EU standards.

The statistics are produced by Statistics Sweden.

### Reporting units

The reporting units are individuals of a sample. Telephone interviews are conducted by Statistics Sweden's interviewers.

### Periodicity

The Swedish Labour Force Survey (LFS) is conducted every month.

### Results availability

The results of the monthly surveys are published about 12 days after the close of the reference period. The results of the monthly inquiries are also used as a basis for the calculation of quarterly and annual averages. The annual statistics are published about four weeks after the turn of the year.

### Sampling frame

In drawing the sample the population in the Total Population Register (RTB) is broken down by county of civil registration, sex, nationality (Swedish/non-Swedish) and employment status (employed/not employed). The procedure gives a total of 24 (county) × 2 (sex) × 3 (age) = 144 sampling strata.

**Compulsory or voluntary?**

Participation in the LFS is voluntary.

**Main features of survey methodology**

The Swedish Labour Force Survey is carried out monthly by Statistics Sweden (SCB). As of April 2005 a new EU-harmonised questionnaire has been introduced. This causes a break in comparability over time. For comparisons, historical data for 2004 have been recalculated and are presented in the tables as linked values.

Quarterly estimates are calculated as mean values of the three months in a quarter. In the same way annual estimates are calculated as mean values of the monthly estimates. Essentially, concepts and definitions follow the guidelines of the International Labour Organisation (ILO). The classifications of industry and occupation correspond to the NACE (Nomenclature Generale des Activités Economiques dans le Communautés Européennes) and the ISCO 88 COM systems respectively. The survey results regularly published refer to the population 16-64 years of age. Confidence intervals for the estimates are presented in the tables.

The Labour Force Survey (LFS) is carried out on an ongoing basis by Statistics Sweden. The objectives of the survey are to describe the current employment conditions and to give information on the development of the labour market.

The results are used, together with other labour market statistics, as the basis for the planning of and decision-making on labour market policy measures, as well as for the follow-up of investment in the labour market. LFS is also an important foundation for general short-term economic evaluations and international comparisons. The results of LFS also provide essential parts of labour market data required for economic and social research. Additionally, the statistics are used generally for mass media information to the public about the labour market.

Data are collected in the first instance by computer-aided telephone interviews conducted by Statistics Sweden interviewers, but by personal visits in cases where the person in the sample cannot be reached by telephone. The LFS sample consists of three separate samples, one for each month in the quarter. Each sample is rotated in such a way that one eighth is renewed between two successive inquiries. Each sample is thus used at three-monthly intervals. Hence persons in the sample are interviewed once a quarter and altogether eight times during a two-year period on their labour market situation. The results of the monthly surveys also form the basis for the calculation of quarterly and annual averages.

**Population size**

The target population in the LFS consists of all persons with civil registration in Sweden who have reached the age of 15 but not 75, approx. 6 800 000 individuals.

Until 2007 the target population consisted of persons with civil registration in Sweden who have reached the age of 16 but not 65 (about 6 000 000 individuals).

**Sample size**

The survey is based on a sample of about 21 000 persons each month.

**Survey response rate**

Because auxiliary information from Statistics Sweden's employment register and the jobseekers' register of the National Labour Market Board began to be used in the estimation procedure (from 1993 onwards) the non-response error was reduced significantly compared with the previous estimation procedure. For employed persons it is estimated that the non-response error has been brought down to less than 1% and for unemployed persons to less than 3%.

**Imputation method**

There is no *substitution* of measurement values for unit non-response and partial loss of data. In the estimation phase account is taken of unit non-response by flat-rate adjustment in each poststratum.

**Sample coverage**

There is a certain over-coverage in the RTB and hence also in the LFS sampling frame. The over-coverage in the RTB is due to the fact that some persons born abroad leave Sweden without reporting the fact to the Swedish authorities. When such persons are included in the LFS sample, there is no indication that they have moved from Sweden. They cannot be reached for an interview and they are therefore classified as non-response. Studies show that the over-coverage is concentrated on non-Nordic immigrants and is of the order of 25 000-50 000.

The fact that the LFS sample is drawn once a year and that sample persons are interviewed eight times during a two-year period means that the sample for year (t) does not cover persons in the target population who are registered in the country during years (t) and (t+1). This under-coverage is thought to have marginal effects on the LFS estimates.

**Grossing method**

The interview results in the LFS monthly inquiries are grossed up to the total population. In the grossing process account is taken of the probabilities of selection for the sample persons and of relevant population data from the RTB.

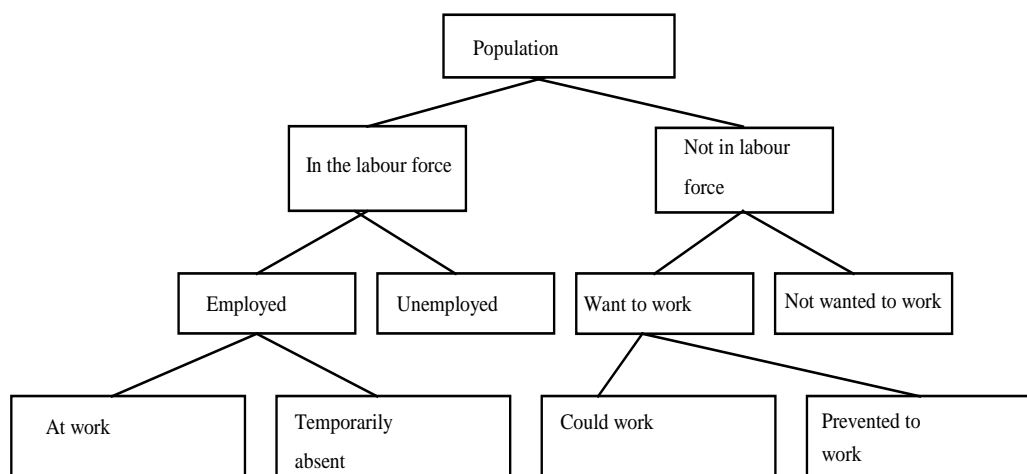
**Main variables collected**

For all persons in the database there are data such as personal identification number, civil status, number of children, nationality, county/municipality, presence in the labour force, attachment to the labour market, educational direction and level.

For employed persons there are data on: working hours, occupation, area of business or industry, trade union membership, nature of employment, occupational status, secondary occupation, studies, absenteeism, reason for absenteeism etc.

For unemployed persons there are data on number of weeks unemployed, desired working hours, method of seeking work, trade union membership, most recent job etc. For persons not in the labour force there are data on principal activity etc.

The labour markets variables contain the individuals' status on the labour market, see figure below.



In October 2007 and onwards individuals who are full time students and also seeks and are ready to work, are included in the category “unemployed”.

Estimates are produced for the following in the Swedish Labour force survey (LFS):

*Totals:* Number of persons employed, number of persons in work, number of hours actually worked, number of persons unemployed, number of persons in the labour force, number of persons not in the labour force etc.

*Quotas:* Relative unemployment, relative absenteeism, relative labour force total, labour intensity, hours normally worked on average etc.

Apart from spot estimates, measurements of uncertainty are also recorded for certain estimates in the LFS.

## **Short-term employment statistics (2005)**

### **Link to inquiries conducted at European level**

In May 1998 the EU took a decision on a regulation (1165/98) concerning short-term employment statistics. This regulates the statistics from 1999 onwards. The statistics are produced by Statistics Sweden.

### **Reporting units**

The entities are the establishments. The establishment is defined as each address, property or group of adjacent properties at which the enterprise conducts activity. All enterprises have at least one establishment.

### **Periodicity**

The inquiry is conducted every month and published quarterly.

### **Results availability**

Approx. six weeks after the close of the measurement quarter.

### **Sampling frame and population size**

This report contains employment figures for the entire Swedish economy including both the private and public sectors. The public sector is subdivided into the following categories: the governmental sector, the municipal authorities and the county councils. The figures are based on both sample and total surveys depending on the size of the establishment.

The target population includes all establishments in the private sector and all organizations in the public sector with at least one employee in accordance with Statistics Sweden's Business register (FDB). Public corporations are included in the private sector. The central bank and public utilities are designated to the private sector.

*Private sector:* The target entity is the establishment. The target population consists of establishments in the private sector having any person employed. Strata in the private sector containing establishments with more than 99 employed includes in total surveys.

The private sector comprises private firms, partnerships, trading companies, incorporated partnerships, companies limited by shares, cooperative societies and non-profit institutions, and foundations. Publicly owned limited liability companies are also assigned to this category. The industry Transport, storage and communications (SNI I) are covered with the exclusion of personnel on board ships in foreign and coastal trades registered in Sweden.

Units must at the same time meet two conditions:

- the institutional code must be separate from the "10" series (public sector)
- The ownership code must not be central or local government and the legal form must not be an agency or department of government or an institution.

*Local government sector:* the target entities are municipalities. The target population also consists of municipalities. Strata in the municipal authorities containing establishments with more than 199 employed includes in total surveys.



*County government sector:* the target entities are county councils. The target population also consists of county councils. Strata in the county councils containing establishments with more than 149 employed includes in total surveys.

*Central government sector:* the target entities consist of agencies and departments of central government. The target population also consists of agencies and departments of central government. Strata in the governmental sector containing establishments with more than 199 employed includes in total surveys.

### **Compulsory or voluntary?**

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's regulations SCB-FS 1992:28 as well as SCB-FS 200:26 for the public sector part.

### **Main features of survey methodology**

Short-Term Employment is an enterprise based survey covering both private and public sector. The survey indicates the development of number of employees for the entire Swedish economy. The report includes results of number of employees by branch of industry. Other variables like absenteeism and personnel turnover are also included in the survey.

The main purpose is to give a rapid indication of changes in the number of employees with a high degree of precision on a detailed industry level. Another purpose is to present employment data across the entire labour market broken down by county. The product also provides information on relevant enterprise-related variables such as absenteeism and staff turnover.

Data on the private sector are collected with the aid of a postal survey from a sample of establishments. The survey is used to collect data on the number of employees broken down by form of employment and sex plus data on absenteeism and staff turnover. Employment data are also collected for all county councils. For other sectors employment, data are collected by way of the short term statistics on pay and employment in the central government sector (*kortperiodiska löne- och sysselsättningsstatistiken inom statlig sektor*, KLS) and the short-term economic statistics on local government pay (*konjunkturstatistiken, löner för kommuner*, KLK).

### **Sample size**

The sample for the private sector comprises approx. 19 500 establishments. The public sector are covered by a sample of 4 100 establishments.

### **Survey response rate**

In the private sector survey covering the second quarter of 2005, non-response was 7.8 % of the establishments sampled. For the variables number of absentees and staff turnover the non-response was 9.6 %.

In the public sectors, non-response was 0%.

### **Imputation method**

Before the material is grossed up to totals, parts of the non-response are imputed and establishments with extreme values are checked by graphic scrutiny. The use of flat-rate

adjustment for non-response compensation is based on the assumption that the non-response can be viewed as entirely random.

### **Grossing method**

The statistics consist of estimated values for aggregates.

Totals are estimated by the following formula

$$\hat{Y}_q = \sum_h^H \frac{N_h}{m_h} \sum_j^{m_h} w_{hj} y_{hj}^*$$

where

q = recording group, h = stratum, H = number of strata

N<sub>h</sub>= number of entities in the gross population

m<sub>h</sub>= number of entities which responded including entities not belonging to the survey population

y\*<sub>hj</sub>= y<sub>hj</sub> if entity j belongs to recording group q, otherwise 0

w<sub>hj</sub>= calibration weighting

### **Sample coverage**

Between the time the sample frame is established and the survey period, changes in enterprises and establishments occur continuously. New establishments are formed, merged, split up or closed. Time-lags in the updating of the sample frame also give rise to coverage errors. In the statistics this means a minor underestimation in the levels of the number of employees, but the effect on the estimations of changes should be slight. In order to compensate for under-coverage a new sample is drawn for the private sector in June of each year.

### **Main variables collected**

The variables measured are number of employees, number of absentees and staff turnover. The recording takes place according to sector, industry, size category, county and sex. The main purpose is to provide a rapid indication to a high degree of precision of changes in the number of employees at a detailed industry level.

Standard errors are presented for selected estimates in the tables.

## **Register-based labour market statistics, RAMS (2005)**

### **Link to inquiries conducted at European level**

There is an EU regulation relating to the RAMS product (Council Regulation No 311/76 on the compilation of statistics on foreign workers).

The statistics are produced by Statistics Sweden.

### **Reporting units**

In the SM presentation (Statistics Sweden's "Statistical Reports") economically active persons are grouped according to municipality of residence and of establishment, industry, sector etc. In the AMPAK compilation statistics are presented with a more detailed grouping by age, sex, industry (SNI-delimited level), children's ages etc. Special processing is also undertaken to order for the provision of statistics based on combinations of variables as requested, as also statistics to a more detailed level of classification, e.g. a five-digit SNI level.

### **Periodicity**

Annual.

### **Results availability**

The statistics are presented approximately 12 months after the measured period (November) each year.

### **Sampling frame**

Full census.

### **Compulsory or voluntary?**

Information to produce the Register-based labour market statistics (RAMS) are collected from the administrative registers of tax returns and income statements at the Tax Agency. Income statements have to be supplied for any person who has received a wage or salary, fee, other compensation or benefit which constitutes taxable income from employment as referred to in the Tax Returns and Income Statements Act (2001:1227).

Other information are collected from the total population register (*Registret över totalbefolkningen*, RTB), the Business database (*Företagsdatabasen* – FDB), the total register on incomes and taxes (IoT), Statistics Sweden's education register etc. Supply of data is compulsory for some of these but this is relevant in an earlier phase than for producing RAMS.

### **Main features of survey methodology**

Labour statistics based on administrative sources allow data to be presented in great detail. Flows in the labour market can also be reported.

The RAMS employment register covers all persons who were registered in the country in the previous December according to the total population register (*Registret över totalbefolkningen*, RTB), from which demographic data are drawn. Education codes are obtained from Statistics Sweden's education register and codes for students/non-students from the register of persons undergoing education. Subsequently data are added from the Income statements (KU) register and the Income and wealth register. With the aid of the latter and the Labour Force Survey (LFS) for October and November, persons are

classified as economically active or not economically active during November. For persons with income statements or income from a business activity, the enterprise/establishment at which the person is deemed to have performed most of his or her work during November is selected. Additional data on this enterprise and establishment are taken from the Business database (*Företagsdatabasen* – FDB).

### **Population size**

The population in the Employment register consists of the population at 31 December each year according to the Total population register.

Individuals aged 85 or more are classified as non-gainfully employed.

Individuals younger than 16 are classified as non-gainfully employed.

### **Survey response rate**

Statistics from RAMS are based on administrative material and hence have the advantage that they constitute a full census and are not subject to non-response.

### **Main variables collected**

The variables are grouped in employment variables, work variables, variables on dynamics of enterprises, other variables and background variables.

Examples of employment variables are employment status, occupational status and variables on income. Examples of work variables are time of employment, wage and industry code of establishment. An example of variable on dynamics of enterprises is year for start of the business. Examples of other variables are code for compensation from unemployment insurance fund, indication of whether the person has children aged 0-6 years etc. Examples of background variables are age reached on 31 December, sex, civil status, SUN\* code for highest level of education, county code of place of residence, name of country of nationality, county of birth

Employment status is a derived variable. The classification of persons by employment status, i.e. whether they were economically active or not in November, is central to RAMS.

With effect from the 1993 income year a more differentiated method is used in which data are distributed in smaller groups linked to the age, sex and type of income statement (whole-year or part-year indication etc.) of the individual. For each group a wage limit is set which determines whether a person is considered to be economically active or not, at income levels deemed to correspond to four hours' work or temporary absence in November.

By calibrating with LFS data at the level of individuals, the new method aims for low net error in the various subgroups compared with economically active persons according to the LFS. The method seeks to minimise the difference between: economically active persons in LFS multiplied by non-economically active persons in RAMS and non-economically active persons in LFS multiplied by economically active persons in RAMS.

### **Structural business statistics (SBS)**

This inquiry as a whole is described in another section of this chapter. As regards employment two questions arise: the average number of employees and the number of hours worked. “Average number of employees” is the figure given in the official annual report, i.e. number of employees converted to full-time persons on an annual basis.

“Hours worked” refers to time actually worked, i.e. work during ordinary working hours, overtime and duty time. Standby time and travelling time during ordinary working hours are also counted as actual working hours.

### **Statistics Sweden’s Business database, FDB**

This register is described in another section of this chapter. The business register contains data on number of employees.

## **11.3 Statistical surveys and other data sources used for the expenditure approach**

### **Turnover statistics - Trade in goods and services (2005)**

#### **Link to inquiries conducted at European level**

Council Regulation No 1165/98 concerning short-term statistics. The inquiry is produced by Statistics Sweden in the Service industry programme.

#### **Reporting units**

The enterprise is the inquiry unit.

The turnover statistics are produced from a sample survey, which measures turnover trends on a monthly basis for retail trade and on a quarterly basis for wholesale trade and certain other service industries. The inquiry results are reported for different industries and groups of industries in accordance with the Swedish Standard Classification of Economic Activities (SNI 2002). The turnover statistics report total turnover, percentage trend figures and index series in total and broken down by the various sub-industries.

#### **Periodicity**

The reference period is the calendar month for retail trade (SNI 52) and the calendar quarter for other industries. The annual values are calculated from the monthly and quarterly data collected.

#### **Results availability**

The production time for the retail trade inquiry on a monthly basis is about four weeks. Text, tables and diagrams on turnover trends, index and time-series are presented in a sales index and press release about 45 days after the close of the reporting month. For the industries surveyed on a quarterly basis production time is about seven–eight weeks, which is also the production time for annual results covering all the industries surveyed.

#### **Sampling frame**

The sampling frame is drawn up in November of the year preceding the inquiry year. It consists of active enterprises in Statistics Sweden's business register (FDB) with their principal activity in the retail trade, wholesale trade and certain service industries. "Active enterprises" denotes enterprises, which are registered for "F" tax, value added tax or employers' contributions. The frame population consists of enterprises (non-financial corporations and unincorporated enterprises) with the following industry codes in accordance with SNI92: SNI 50, 51, 52, 55, 60, 61, 62, 63, 64, 70 (excl. 70201), 71 (excl. 71.1 and 71.2), 72, 74 (excl. 74.15), 90, 92 (excl. 92.5, 92.6 and 92.72) and 93.

The frame population is stratified by annual turnover according to the VAT Register 12 months prior to the inquiry year. (The VAT Register as a whole is described in an earlier section of this chapter.) Enterprises, which had no turnover according to the VAT Register, can be selected in the supplementary sample.

Enterprises with an annual turnover less than SEK 200 000 according to the VAT Register are included in the survey in a special strata, not to lose newly-started business.

Size classification varies from industry to industry. In the turnover statistics five different size categories are applied in the ordinary sample. An example of a size classification is as follows (for some industries):

- 0: 0 – 200 000
- 1: 200 000 – 1.4 millions
- 2: 1.5 – 3.4 millions
- 3: 3.5 – 14.9 millions
- 4: 15 – 99.9 millions
- 5: 100.0(200.0) – 999.9 millions
- 6: 1 billion –

The sampling method is a Simple Random Sample (SRS) in each stratum.

### **Compulsory or voluntary?**

Supply of data for the inquiry is compulsory under the Official Statistics Act (SFS 2001:99), the Official Statistics Ordinance (SFS 2001:100) and Statistics Sweden's regulations (SCB-FS 2002:23).

### **Main features of survey methodology**

Statistics Sweden has investigated turnover in the retail trade etc. since 1963, when the statistics were taken over from the National Board of Health and Welfare. The statistics have been extended to include quarterly data for the wholesale trade and certain service industries.

The Turnover statistics is one of the principal sources for the private consumption and the GNP. Almost 50 percent of the basis of the private consumption comes from the Turnover statistics.

As from 2003 the monthly statistics, the retail sales, are accomplished together with the Swedish Retail Institute (HUI).

Data are collected in a survey, which is sent to the financial manager of the enterprise. If anyone other than the financial manager responds to the survey, that person is registered as the contact person. Collection is by Touchtone Data Entry (TDE), fax, post and telephone. In TDE, the enterprise taps in the turnover data on its telephone keyboard. About 60% of respondents today supply data by TDE. About a week before the final return date, a "preliminary reminder" is sent to those enterprises, which have not yet responded. The list of enterprises, which have not responded to the survey when the final return deadline has expired, is passed on to the interview group at Statistics Sweden, who telephone and remind the enterprises within one to two weeks.

The measuring instrument is a survey, which is sent out every quarter/month to the respondent. On the form the enterprise has to fill in the turnover for the period in question. The survey instructions indicate whether turnover is to be stated inclusive/exclusive of VAT or inclusive/exclusive of exports. For ATG outlets and agencies (*AB Trav och Galopp* (ATG) is a major Swedish provider of betting and gaming services), only commission on the agency function is to be reported, not the value of the product or service intermediated. The instructions also state that the turnover indication is to cover

the enterprise's entire turnover for the period and that the amount is to be given in SEK '000.

For care- and nursing enterprises the statement is added: Turnover shall contain payment, from private persons, society and businesses, for services carried out.

During 1992 a new method was brought into service in the turnover statistics in order to calculate total turnover, which is a combined ratio estimator. For 1991 there was no turnover level estimated by this method, the consequence of which was that difficulties arose in estimating the change in turnover for 1992/1991. This was resolved by making use of turnover according to the VAT Register for 1990, extrapolated by the trend according to IF 1991/1990, in order to obtain the turnover level for 1991.

Turnover is described partly as a *figure for the trend* between the same period in two years, partly as a *total* and partly as an *index* in different industry groups.

The statistical measurement described in the first paragraph, as well as being calculated at *current prices*, is also calculated at *constant prices*, *constant and calendar-adjusted prices* and *current and calendar-adjusted prices*. The constant-price calculation of turnover is carried out with the aid of an industry price index developed by Statistics Sweden's price programme. In order to compare one period with the corresponding period in the previous year, which often does not comprise an equal number of weekends or calendar days, a calendar adjustment is carried out. The index to calculate turnover in calendar-adjusted prices is produced by Statistics Sweden in consultation with representative organisations of the trade.

For retail trade a seasonally adjusted series and a trend series expressed in the form of an index are also calculated.

### **Population size**

The population consists of all enterprises in SNI 50, 51, 52, 55, 60, 61, 62, 63, 64, 70 (excl. 70201) 71 (excl. 71.1 and 71.2), 72, 74 (excl. 74.15), 90, 92 (excl. 92.5, 92.6 and 92.72) and 93.

The enterprise is the inquiry unit. In the 2005 inquiry year the frame population comprised 461 153 enterprises.

### **Sample size**

The ordinary sample for retail 2005 comprised 2 442 enterprises and the supplementary sample 289 enterprises.

For other service trades the sample 2005 comprised 4 615 enterprises in the inquiry sample and the remaining 317 525 enterprises via the VAT Register.

### **Survey response rate**

The unweighted response rate for the monthly inquiry was between 76 and 79 % each month during 2005. The weighted response rate, in which account is taken of the turnover of the respondent enterprise, was between 93 and 95 % each month during 2005.



For the industries surveyed on a quarterly basis the unweighted response rate was 78-88 % and the weighted response rate 90-94% during 2005.

### **Imputation method**

If the respondent supplied data using his telephone keypad (TDE), the data supplied were scrutinised directly in terms of the values for the previous year and period. If the data seemed implausible the respondent was asked to confirm whether the data were correct. On manual registration these data are also scrutinised in terms of the values for the previous year and period.

The macro-check begins with a check to ensure that the data are not cumulative. Subsequently each industry is scrutinised to detect trend figures and confidence intervals, which are unnatural and divergent. In industries with a somewhat divergent trend figure, the data for the enterprises in the industry are studied. Enterprise data, which diverge appreciably from the data supplied to the VAT Register in the same period two years previously are studied at micro level and are verified by contact with the enterprise.

When the final scrutiny starts, a list is drawn up of the large enterprises (there are different limits for different industry groups but size categories 5-8 apply in most cases) which have not responded and which the scrutinizer now for the last time asks to supply data. For large enterprises in the various industry groups from which it is still not possible to obtain data, other sources are used. The ranking is then as follows: 1. Turnover value supplied to the inquiry in the same month of the previous year. 2. Turnover value according to the VAT Register for the same month in the previous year. 3. Turnover value supplied to the inquiry in the previous month. If a turnover indication is not available for the first level, the process moves to level 2 and so forth. Use of these sources only applies to a few enterprise units and never to the largest ones in the various industry groups.

For the smaller enterprises (there are different limits for different industry groups but size categories 0-4 apply in most cases), which have not responded, the non-response is compensated via re- weighting.

### **Grossing method**

The level estimation in an industry is calculated with the aid of a combined ratio estimator, in which turnover according to the VAT Register in year  $t-1$  is used as auxiliary information in the denominator.

For those enterprises, which make up the non-response a method known as compensation weighting is used. The method gives the same results as use of the mean value for respondents in the same stratum; the difference is that a value is not explicitly assigned to the non-respondent units. Compensation weighting occurs both in the denominator and the numerator.

Under-coverage and over-coverage increase successively over the year since the surveyed population is dynamic, with a large number of closed and newly launched enterprises. Over-coverage in the form of closed enterprises and enterprises incorrectly assigned to industries which do not belong to the target population can usually be identified but cause the random error to increase. Incorrectly assigned enterprises, which belong to one of the industries surveyed, are recorded in those industries from which they were sampled and to whose turnover they therefore contribute.

It is considerably more difficult to detect under-coverage, since it is difficult to capture newly launched enterprises during the survey year. The significance of under-coverage is difficult to assess.

A supplementary sample is drawn each year in order to limit under-coverage. In the ordinary sample the population is stratified by turnover according to the VAT Register two years prior to the inquiry year. The consequence of this is that those enterprises, which were launched during the year prior to the inquiry year, are not included in the sample. The frame population of the supplementary sample includes enterprises in the frame population of the ordinary sample which did not have any turnover according to the VAT Register two years prior to the inquiry year but which had paid wages according to their tax declarations (UBD) in the year prior to the inquiry year. Stratification in the supplementary sample is geared to payroll total.

### **Sample coverage**

Sampling error for turnover in retail trade as a whole is calculated according to the 95% confidence interval at approx. plus/minus 0.7 %. Newly launched enterprises are not captured in the inquiry year, which means that under-coverage increases successively and hence causes total turnover to be underestimated. The trend compared with the corresponding period in the preceding year is not affected in the same way if the under-coverage can be assumed to affect both periods in the trend figures to an approximately equal extent.

Turnover is produced for enterprises which have been assigned a five-digit industry code describing their principal activity, which need not be the only activity pursued by the enterprise. This means that turnover data can cover activity in other industries within or outside the retail trade. For example the clothing industry contains turnover from other industries, while at the same time other industries contain activity, which belongs under the heading of the clothing industry.

### ***VAT statistics***

With the aid of the VAT Register, Statistics Sweden compiles statistics on annual turnover in all industries (SNI02). Production time is about half a year after the close of the inquiry year. Production time for the turnover statistics is shorter, and the annual data are reported about seven weeks after the close of the inquiry year. The statistics from the VAT Register have the merit that, unlike the turnover statistics, they can be broken down at regional level (which is also their main purpose), but the disadvantage is that production time is long.

As regards definitions, comparability between the Turnover statistics and the VAT Register is good. However, the methods of the inquiries differ somewhat. The Turnover statistics are a sample inquiry, while the VAT Register is a full census. The populations are also not fully comparable. The VAT Register covers all enterprises, which paid VAT for the measurement period, which in theory means that the VAT statistics, unlike the turnover statistics, also cover businesses newly launched during the inquiry year. Also changes of industry during the inquiry year can lead to discrepancies between the inquiries.

### ***Business statistics***

In the Business statistics trends in aspects such as different income and cost variables at industry level can be discerned. The Business statistics are a full census of all enterprises with the exception of those belonging to the institutional sector “Financial corporations” and unincorporated enterprises in agriculture, forestry, hunting and fishing. The Business statistics have a relatively long production time (at least a year). The inquiry variable “turnover” is not covered according to the same definition as in the Turnover statistics. The Business statistics apply the concept of net turnover, which includes all sales income for goods and services within and outside the country exclusive of VAT. By contrast the Turnover statistics investigate turnover inclusive of VAT and exclusive of exports in SNI industries 50, 52, 55, 92.1-4, 92.71 and 93; hence there are discrepancies. In the other service industries covered by the Turnover statistics it should be possible to achieve relatively good comparability with the Business statistics. Another essential difference between the inquiries is that the samplings frame for the Turnover statistics, hence also the industrial classifications, is one year older than for the Business statistics.

**Main variables collected**

Inquiry variable: Turnover

Description: Sales income for goods and services

In industries SNI 50, 52, 55, 92.1-4, 92.71 and 93 turnover is recorded inclusive of VAT and exclusive of exports. In other industries turnover is recorded exclusive of VAT and inclusive of exports.

On all forms the statement is added: For outlets and agencies handling ATG betting and gaming services only commission on the agency function is to be reported, not the value of the product or service intermediated.

For care- and nursing enterprises the statement is added: Turnover shall contain payment, from private persons, society and businesses, for services carried out.

## **Household budget survey, HBS (2003-2005)**

### **Link to inquiries conducted at European level**

Household budget surveys are conducted in all EU-countries. There is no EU regulation, but there is an agreement to use the “Household budget surveys in the EU” methodology and recommendations for harmonization 2003”. The statistics are produced by Statistics Sweden.

### **Reporting units**

Private household units resident in the country, i.e. households with a common place of residence and shared catering.

### **Periodicity**

Annual from 1999.

### **Results availability**

The results are presented in June the year after the close of data collection.

### **Sampling frame**

Systematic sampling of persons aged 79 and under to the end of last year from the Total population register (*Registret över totalbefolkningen*, RTB).

The method of selection for persons in a household inquiry sample means that larger households have a greater probability of selection than smaller households. From certain points of view this makes for an effective distribution of the sample over different household groups. Account is taken of this over-representation in the grossing procedure.

The sample survey is distributed over 52 starting weeks for record-keeping.

### **Compulsory or voluntary?**

There is no obligation to supply data.

### **Main features of survey methodology**

The main objective of the Household Budget Survey (HBS) is to illustrate expenditures for goods and services among different household groups. The intention is to show the level of consumption and consumption structure for different groups of households.

Telephone interviews, postal surveys and record-keeping are used. The survey continues for a whole year. All household expenditure must be indicated over a period of two weeks. In addition expenditure for infrequent purchases is reported retrospectively for one year. Some other types of expenditure are indicated for two months retrospectively (clothes, shoes and local travel).

Computer-aided telephone interviews are used for household mapping. Entry of records by telephone from 1999 onwards (previously records were entered in conjunction with a home visit). Self-managed record-keeping for two weeks (previously four weeks).

Expenditure is recorded for different types of household with respect to age, number of children, type of housing, socio-economic group, “H” region and disposable income. For

clothes and shoes data are also recorded for individuals by sex and age. Averages per household and year are calculated as well as percentage distributions.

**Population size**

Number of households in the country with persons aged 79 and under. For 1999 this was around 4.4 million households.

**Sample size**

4 000 households randomly sampled from the Total population register (*Registret över totalbefolkningen*, RTB).

**Survey response rate**

Non-response is about 42 %. Measures to limit non-response:

Incentives (gifts to a value of approx. SEK 100) are offered in order to increase the response rate.

Special interviewer training.

Measures to simplify record-keeping (reduction of burden on respondents).

**Imputation method**

In the survey, data were obtained, for example, from the motor vehicle register on changes in car ownership for the households participating in the survey. Expenditure on motor vehicle purchases could be calculated with the aid of price data. Petrol consumption was calculated with the aid of data on average distances driven and price data.

If a household don't remember the cost of a purchased product, the average cost for the product is imputed.

**Grossing method**

*Number of households:* The Total population register gives the frame population with negligible coverage error. Each household is weighted by a factor depending on the number of members with a probability of selection. In order to compensate for non-response and bias, the weightings were subsequently changed and calibrated. The calibration method used here is asymptotically equal to the general regression estimator. The method requires access to auxiliary information, i.e. some form of external information, which varies coincidentally with the inquiry variables. The auxiliary information used consists of certain demographic variables according to the RTB, such as number of persons in the household, "H" region and income. In order to guarantee representative annual estimates, compensation was also made in the calibration for variations in the number of participating households over time.

**Sample coverage**

The inquiry does not cover households consisting only of persons over 79. There is a risk of underestimation of small expenditure items due to forgetfulness and a risk of overestimation of major items due to "telescope effects".

**Main variables collected**

All household expenditure is collected. The expenditure is recorded in terms of goods groups and goods or services. From 1999 onwards the COICOP classification is followed.

The two most essential variables are:

- Average annual expenses per household and type of expense
- Average annual expense share per household and type of expense

**Further adjustments**

Annual data are collected for infrequent purchases. For certain items, consumption is requested over the most recent two months. This applies, for example, to clothes, shoes and local travel.

## **Food sales (2005)**

### **Link to inquiries conducted at European level**

The inquiry is conducted by Statistics Sweden. There is no EU regulation.

### **Reporting units**

The reporting units are joint-stock companies, economic associations, trade- and limited partnership companies, governmental business departments, private businesses and some foundations.

### **Periodicity**

Annual.

### **Results availability**

Eleven months (November) after turn of the reference year.

### **Sampling frame**

The sampling frame is registered retail trade enterprises (SNI 52) and petrol stations (SNI 50.5) in Statistics Sweden's Business database (FDB) in November the reference year.

### **Compulsory or voluntary?**

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99), the Official Statistics regulation (SFS 1994:1108) and Statistics Sweden's' directive (SFS-FS 2002:11).

### **Main features of survey methodology and population size**

The aim of the publication is to show turnover by type of product within the trade of food and beverages.

The first four levels of the Swedish classification by industry (SNI) are identical with EU standard NACE Rev. 1 (Statistical Classification of Economic Activities in the European Community).

The following sources are used in the Food sales.

- The Sweden's Business database (FDB).
- Inquiry of sales of fresh fruit and vegetables in the wholesale trade.
- Inquiry to companies in the retail trade and petrol stations, who don't belong to any of the large everyday commodities' groups ICA, Kooperationen, Axfood, Bergendahl or Vi-handlarna.
- The VAT Register
- Register of companies belonging to the groups ICA, Kooperationen, Axfood, Bergendahl and Vi-handlarna.
- Data register of sales from these food sales groups.

The data register from the large everyday commodities' groups is the most important source of information.

The definition of food products is the same as for the value-added tax (12 %) for food and beverage products. In total there are about 70 000 products.

**Sample size**

Full census.

**Survey response rate**

The response rate is about 65 %.

**Imputation method and grossing method**

Using the VAT register.

**Sample coverage**

Over coverage: companies with wrong industry code, inactive companies and closed-down companies.

Under-coverage: companies with wrong industry code and newly started companies.

**Main variables collected**

The main variable collected is turnover (including taxes).

The turnover is presented for types of product such as food, beverages, tobacco, pharmacies, perfume, repair and service etc. The products are grouped in about 50 groups for the national accounts.

The food sales are shown for groups of products according to the Classification of Individual Consumption by Purpose, (COICOP). The groups of products in these statistics are within Coicop 01 (food and non-alcoholic drinks) and 02.1 (Alcoholic drinks). In total there are 39 groups reported in the food sales.



## **Retail trade – product by product (2002)**

### **Link to inquiries conducted at European level**

The inquiry is conducted by Statistics Sweden.

For short-term statistics retail trade covers Division 52 of NACE Rev. 1.1: retail trade, repair of personal and household goods. All features of transmission of short-term indicators to Eurostat, including coverage, are defined in Regulation EC No 1165/98, as amended by Regulation EC No 1158/2005 and the regulations implementing and amending these two instruments.

### **Reporting units**

Retail trade enterprises.

### **Periodicity**

Every fifth year. The data usually refer to calendar years. Data on sales the last 12 months are sometimes accepted.

### **Sampling frame**

The sampling frame is all registered retail trade enterprises (SNI 52) in Statistics Sweden's Business database (FDB) in November the reference year.

### **Compulsory or voluntary?**

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's directive (SFS-FS 1998:17).

### **Main features of survey methodology**

The postal survey contains economic statistics on retail trade. The aim of the publication is to show turnover by type of product within the retail trade.

The following sources are used in the Retail trade survey.

- The Sweden's Business database (FDB).
- Inquiry of sales of a) sales by products, b) internet trade, and c) shops per sales unit.
- Food sales (described in another section of this chapter)
- Register of companies belonging to the groups ICA, Kooperationen, Axfood, Bergendahl and Vi-handlarna.
- Data register of sales from these food sales groups.

The data register from the large everyday commodities' groups is the most important source of information.

### **Population size**

The population size was 60 582 enterprises in 2002.

28 856 (48 %) of these belonged to one of the four large everyday commodities' groups.

### **Sample size**

Full census for the four large groups.

Sample of 3 423 of the enterprises who are not part of the large groups.

**Sample coverage**

Over coverage: companies with wrong industry code, inactive companies and closed-down companies.

Under-coverage: companies with wrong industry code and newly started companies.

**Grossing method**

By means in the strata. The stratas are based of number of employees and annual turnover.

**Main variables collected**

Sales and turnover by product and industry.

## **Income and cost inquiry for multiple-occupancy buildings (2005)**

### **Link to inquiries conducted at European level**

The inquiry is conducted by Statistics Sweden in the programme for housing. No EU regulation has been introduced.

### **Reporting units**

Three ownership categories are used:

- Municipally owned housing corporations,
- Private ownership
- Tenant-owners' associations

For municipally owned housing corporations and tenant-owners' associations data are obtained on the enterprise or association. Because of this it is easier to obtain the relevant data for them than for the private ownership group, in which data only cover individual properties/tax assessment units or groups of such units. For privately owned dwellings and tenant-owners' associations recording is by age (year of construction, valuation year) and size (number of dwellings). Municipal housing corporations are only recorded in terms of region and size, not age.

### **Periodicity**

Annual. The inquiry covers the calendar year.

### **Results availability**

Production time is 11 months.

### **Sampling frame**

Sampling is used for the coverage of privately owned houses and tenant-owners' associations. The sampling frame is drawn from Statistics Sweden's real estate tax assessment register.

### **Compulsory or voluntary?**

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's directive (SFS-FS 1998:17).

### **Main features of survey methodology**

The main purpose of the inquiry is to provide information on income, costs and operation net in multiple-occupancy buildings. In addition information is provided on such aspects as long-term borrowings, tax assessment values and expenditure on reconstruction (also new construction for municipally owned housing corporations).

In its present form the inquiry has been conducted since 1975. Comparability over time diminishes, for example, because of changes in tax rules, subsidy rules, recording principles and changes in industry structures. But overall there should be good comparability in the period 1970-1980. The rapid changes in the real-estate industry over much of the 1990s have increased uncertainty in the statistics. It is mainly in the field of operating costs and capital costs for the private ownership group that uncertainty has increased. One reason for this may be that company overheads are not fully apportioned or are not apportioned at all to the reporting unit in the company's accounts and/or in Statistics Sweden's questionnaire. Underestimations result.

For privately owned dwellings and tenant-owners' associations data for Statistics Sweden are collected by questionnaire. For municipal housing corporations affiliated to the Swedish Association of Municipal Housing Companies (*Sveriges Allmännyttiga Bostadsföretag*, SABO), SABO handles data collection (questionnaires). After scrutiny and supplementing, the data are transferred to Statistics Sweden. For corporations, which are not members of SABO, data collection is carried out by Statistics Sweden using questionnaires.

### **Population size**

The population comprises municipally owned housing corporations, multiple-occupancy buildings owned by tenant-owners' associations and dwellings owned privately (by legal and natural persons, not municipal housing corporations or tenant-owners' associations).

For municipally owned housing corporations the entire housing stock is included.

All tenant-owners' associations with a maximum of 20 % of individual houses in the association are included.

For privately owned dwellings tax assessment units conforming to the following criteria are included:

- rented accommodation units with tax assessment code 320 or 321 (mainly dwellings and mixed residential and commercial premises, respectively)
- a minimum of 500m<sup>2</sup> of residential space in the tax assessment unit
- maximum 25 % of the total area is used for business activity
- completion up to and including the year before the inquiry year.

The population does not include real estate owned by central or local government and municipally owned housing corporations comprising mainly special-category dwellings (e.g. retirement homes and student accommodation) or owners who mainly let furnished apartments or accommodation in which the area of commercial use exceeds the area for residential use. In addition it does not include privately owned tax assessment units and tenant-owners' associations in the following categories: agricultural properties, properties consisting mainly of furnished apartments or special-category dwellings, properties whose area for commercial use exceeds 75% of the combined residential and commercial space, properties under reconstruction and properties in shared ownership.

### **Sample size**

Municipally owned housing corporations are covered by a full census, i.e. all corporations in the population are included in the inquiry. Sampling is used in the coverage of privately owned dwellings and tenant-owners' associations. Sampling method: stratified sample with simple random sampling within strata with the tax assessment unit as the sampling unit. Stratification is by three variables: ownership category, size and age category (valuation year). New samples are drawn approx. every five years with supplementary samples for new construction in between inquiries.

The sample size in 2005 was approx. 4 700 tax assessment units, of which 2 800 for the privately owned portion and 1 900 for tenant-owners' associations.

### **Survey response rate**

Non-response from units in recent years has been around 25% for privately owned dwellings and 10% for tenant-owners' associations, calculated on the basis of the number of units in the sample. The non-response rate corresponds to around 18-20% of the total area of privately owned accommodation and 6-8% for tenant-owners' associations. For municipally owned housing corporations (full census), which did not respond to the survey, the rate was around 3% of the total number of dwellings.

The risk of bias is greatest for privately owned dwellings, where the non-response rate is 25%. No studies or quantifications of the effects of the non-response have been carried out. However, it may be assumed that the inclination to respond is lower as the financial return on the ownership of the property is poorer. In such cases there is a tendency to underestimate the cost picture for private ownership. In addition a large number of privately owned properties during the first half of the 1990s, compared with isolated cases during the 1980s, were removed from the inquiry because of bankruptcy.

In order to minimise non-response, 2-3 reminders are sent out for privately owned properties and tenant-owners' associations. The questionnaire is reviewed before each inquiry. A separate letter is sent to owners/managers with several non-responding units.

### **Imputation method**

The most common problems in data preparation are partial non-response and combination of variables in the return of data. This is remedied by amendments from the respondent or, in certain more straightforward cases, by imputation.

### **Grossing method**

The inquiry is a descriptive survey intended primarily to estimate mean values for different income and cost variables. Adjustment for non-response for privately owned properties and tenant-owners' associations are carried out by approximating the mean value for the stratum in question with the mean value for the respondents ("flat-rate adjustment").

For the grossing to population level of privately owned properties and tenant-owners' associations, weightings are used in inverse proportion to the sampling probabilities of the tax assessment units. The weightings are adjusted for non-response (flat-rate adjustment). For municipal housing corporations, which are covered by a full census, no adjustment is carried out for non-response (low non-response rate).

### **Sample coverage**

For samples covering privately owned properties and tenant-owners' associations sampling frames are constructed from Statistics Sweden's real estate tax assessment register. The frame population covers the target population well. For privately owned properties and tenant-owners' associations, tax assessment units are included with properties built up to and including the year before the inquiry year. Municipally owned housing corporations are surveyed by a full census. Coverage is good.

### **Main variables collected**

The statistical measurements are:

Mean value (for income, costs, and long-term borrowings).

Total (long-term borrowings, tax assessment value, interest, Interest allowance, reconstruction).

Number (dwellings, commercial units, garage, and other car spaces).

Surface areas (dwellings, commercial units).

#### Incomes

- Income for housing
- Income for commercial premises
- Income for garages and parking spaces
- Subsidies from the EU (only municipally owned housing corporations)
- Financial incomes (only municipally owned housing corporations)
- Other income (including interest income, only applies to privately owned properties and tenant-owners' associations)

Total income

#### Costs

- Rental loss
- Capital costs (specified by interest, depreciation, ground rent, other capital costs)
- Interest allowance
- Interest income (only municipal housing corporations)
- Local government grant (only municipal housing corporations)
- Central government grant (only municipal housing corporations)
- Maintenance expenses
- Total operating costs
- Upkeep, management, administration
- Administration (only municipal housing corporations)
- Fuel costs
- Assessment-related costs (combination of water supply and sewerage, refuse collection and chimney-sweeping plus electricity for the property)
- Insurance
- Other operating costs
- Real-estate tax

Total costs

Reconstruction expenditure (including standard improvements)

New construction expenses (only municipal housing corporations)

Tax assessment value

Long-term borrowings

#### Other

Number of dwelling units

Number of commercial units

Number of heated garage spaces

Number of parking spaces

Area of residential space

Area of commercial space

Heated garage area

Total area

## **Survey of rents for dwellings (2005)**

Survey of rents for dwellings (HiB) is a new survey with its origin in the Housing and rental inquiry (*Bostads- och hyresundersökningen, BHU*).

The BHU consisted of two parts.

(1) The “Owners” part, which was an annual survey of rentals and charges in multiple-occupancy buildings with property owners supplying data by postal surveys. As from 2003 only tenanted dwellings are part of the new survey (HiB). The BHU also covered tenant-owner's associations.

(2) The “Households” part, which provided information on the housing conditions, composition, accommodation expenses and incomes of households, was published for the last time in 2002. Corresponding statistics are now published within the framework of Household's finances (HEK). The Household's finances as a whole are described in another section in this chapter.

### **Link to inquiries conducted at European level**

The inquiry is conducted by Statistics Sweden. No EU regulation has been introduced.

### **Reporting units**

Data collection is by postal survey sent to the property owner (property manager). Important classification criteria are region, completion year and dwelling type.

### **Periodicity**

Annual sample survey.

### **Results availability**

Production time is 6 months for the final report and it is published in June.

### **Sampling frame**

The sampling frame is the Population and Housing Census supplemented by Statistics Sweden's register of newly produced dwellings.

### **Compulsory or voluntary?**

Supply of data to the inquiry is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's regulations (SCB-FS 1992:44).

### **Main features of survey methodology**

The main purpose is to provide information on rentals and changes in rentals and on the composition of the housing stock and its distribution by various forms of tenure, dwelling types and age.

The main statistical features are:

- Number of flats
- Mean annual rental/charge
- Mean rental/charge year 0
- Percentage change in rental/charge between year 0 and year 1.
- Mean rental/charge per area in square metres
- Mean area in square metres per flat

**Population size**

The population includes all tenanted dwellings which were counted in the 1990 Population and Housing Census and new dwellings completed up to and including the year before the inquiry year, which are included in Statistics Sweden's housing construction statistics.

The population does not include the following categories: agricultural properties, properties consisting mainly of furnished apartments or special-category dwellings (for example student housing), properties whose area for commercial use exceeds 75% of the combined residential and commercial space, properties under reconstruction, rent-free properties and properties in shared ownership, .

The housing construction statistics include all new buildings with at least one dwelling intended for a private household, which is structurally separate from other housing.

**Sample size**

Sampling errors are relatively small, since the sample is large and the population relatively homogeneous. The sample is drawn annually from around 12 200 tenanted dwellings. The sample is stratified by region, completion year and dwelling type.

**Survey response rate**

Non-response is low. In the 2005 inquiry there was a residue of 938 dwellings, i.e. 7.8 % for which, after written reminders, no data could be obtained from the property owners.

**Imputation method**

The data collected are checked in a data program. Since the inquiry is a panel inquiry, there are good possibilities for checking against data collected for the previous year. Any missing values are imputed with the value for similar dwellings or the value for the previous year.

**Sample coverage**

Under-coverage stems from non-response in the Population and Housing Census. Over-coverage stems from tenanted dwellings that, for example, has changed category to special-category dwellings during the year. The over-coverage is discovered in the survey and is not causing any errors in the final results.

**Grossing method**

The estimates for the population are carried out by means of information from the sample on stratas. The estimates are covering the population with 95 % confidence intervals.

**Main variables collected**

The main variables collected are:

- Form of tenure
- Dwelling type
- Ownership category
- Dwelling surface area in square metres
- Completion year
- Valuation year
- County, municipality, parish assembly code



- Regional grouping at 1 January in the year of the inquiry
- Monthly rentals in year 0. (Including heating supplement, excluding domestic electricity and garage.)
- Annual rental/charge year 0. Including heating supplement, excluding domestic electricity and garage
- January rental/charge year 1. Including heating supplement, excluding domestic electricity and garage

The statistical measurements published are number, mean value and mean error for rental/dwelling, rental/square metre and change in rental.

## **Household's finances (2005)**

The Survey of Household's finances (HEK) is a new survey with its origin in the Housing and rental inquiry (*Bostads- och hyresundersökningen, BHU*). The “Households” part of BHU, which provided information on the housing conditions, composition, accommodation expenses and incomes of households, was published for the last time in 2002. Corresponding statistics are now published within the framework of Household's finances (HEK).

The HEK is a far-reaching survey, covering a large quantity of information. The aim of the survey is to map the distribution of disposable income among different households, to illustrate income structures and to describe the living situation and living expenses for various types of households.

In the following only the housing part of the survey is described, as source for the GNI accountings. Since information on tenanted dwellings are collected in Survey of rents for dwellings, only data on simple/private ownership (individual houses), tenant-ownership is received from Household's finance.

### **Link to inquiries conducted at European level**

The inquiry is conducted by Statistics Sweden. There is no EU regulation.

### **Reporting units**

Sample survey covering individuals and they are also asked questions of their whole household.

### **Periodicity**

Annual, the survey covers the calendar year.

### **Results availability**

Production time is approx. 12 months.

### **Sampling frame**

The Total Population Register is used for the sampling frame. The sample is made up of people aged 18 or over.

### **Compulsory or voluntary?**

The inquiry is voluntary.

### **Main features of survey methodology**

Household Finances (*Hushållens ekonomi, HEK*) is a sample survey carried out every year. Up to and including the income year 2000, the sample was coordinated with Statistics Sweden's Longitudinal Individuals Database (LINDA). The coordination with LINDA provides the possibility to follow sample persons and their households over several years.

The main purpose of the housing part of the survey is to provide information on the housing conditions, composition, incomes and accommodation expenditure of households in combination with accommodation data. The data are recorded for the three forms of tenure: simple ownership (individual houses), tenant-ownership rights and ordinary

tenancies. Since information for the GNI on tenanted dwellings are collected in Survey of rents for dwellings, only data on simple/private ownership (individual houses), tenant-ownership is received from Household's finance.

For the GNI accountings the two most important items are:

- Area in square metres per flat
- Costs for maintenance and repair

Most of the data were obtained from a computer-aided telephone interview with the sample person. Data to create variables such as disposable income, aggregate income and tax effects were obtained from Statistics Sweden's tax assessment bands for the income year. Housing allowance data were also obtained from Statistics Sweden's registers, and data on tax assessment values etc. were obtained from the real-estate tax assessment register.

### **Population size**

The population for the survey consists of all households and people who were registered in the population register in Sweden at some point during the survey year (income year).

### **Sample size**

In total the coordinated gross sample comprises approx. 17 600 individuals and information is collected from them for about 40 000 household-members.

### **Survey response rate**

Refused to take part of survey	16,0
Not reached	12,6
Could not take part of survey	3,0
Total non-response	31,6 percent

Non response is not weighted

### **Imputation method**

Data collected are checked by a machine-aided procedure as regards completeness, plausibility and reconcilability. Unit non-response was made up by amended grossing factors and partial non-response was filled in by average figures based on units for which measurement values were obtained.

### **Sample coverage**

Over-coverage: Emigrant who not report their move to other country.

Under-coverage: Immigrants who not report their move to Sweden.

The total over- and under-coverage amount to about 1 % of the total sampling frame.

### **Main variables collected**

The main variables collected are:

- Dwelling surface area in square metres
- Annual maintenance and repair, to keep the building/flat in its original condition (excluding maintenance of garden etc)

## **Total activity of central government**

### **Reporting units**

The basis of central government net lending (Underlag till statens finansiella sparande, UFS) covers all institutional units, which form part of the central government sector. Total activity is produced by the Swedish Financial Management Authority (*Ekonomistyrningsverket*, ESV) and is provided for the national accounts on electronic. It is supplied as an Excel file in the form of PivotTables, from which it is possible to extract data on the desired level.

### **Periodicity**

Total activity is presented on a quarterly basis in February, May, August and November, covering results up to and including the close of the previous quarter. It is published as *Underlag till statens finansiella sparande* which is a documentation on central government net lending (the basis of central government net lending).

### **Results availability**

For 2000 onwards, see previous paragraph. Preliminary results for the second half year were previously available in February/March of the year following the period in question and for the first half-year in August/September of the same year. Final data were presented a couple of months later.

### **Compulsory or voluntary?**

All agencies and departments are obliged to supply data. The corporations and other central government institutions, which are included, supply data to the Financial Management Authority voluntarily.

### **Main features of survey methodology**

A significant proportion of central government activity is not recorded in the national budget. This means that the expenditure is financed otherwise than by appropriations and that income is not returned in terms of the income headings of the national budget. This part of central government activity is financed instead by charges and levies, fund resources and sales revenue. In order to measure and describe all flows of goods, services and money between central government and other sectors in the national economy, the ESV produces statistics covering activity both within and outside the national budget. These statistics on total central government income and expenditure follow the national accounts apportionment of central government income and expenditure by real economic types and are termed “the basis of central government net lending”.

An important difference between the national budget and total central government activity is that both the income and the expenditure sides of the national budget are to a certain extent recorded net. In total activity, on the other hand, most income and expenditure are recorded gross. In addition total activity is consolidated, i.e. transactions within and between agencies and departments are calculated net.

One of the main purposes of total income and expenditure of central government is to provide material, which can be used directly by Statistics Sweden in order to compile the national accounts (NA). The definition of the central government sector is therefore adapted to that applicable in the context of the national accounts.

In addition the national accounts use a classification of expenditure according to purposes based on an international standard (COFOG) developed by the UN. Items of expenditure with similar purposes or functions are grouped together without regard to their real economic nature. The classification by purpose gives increased possibilities for comparisons over time and for comparisons with other countries. The classification by purpose only partially coincides with the definition of the various expenditure areas now used in the compilation of the Swedish national budget.

**Main variables collected**

The national accounts concepts and demarcations are based on the European System of National Accounts 1995 (ESA 1995). An important starting point for the NA work is that income and expenditure are classified in real economic terms. This means in the first place that the accounting material of central government agencies and departments is regrouped in terms of real economic types, at a level such that the data can be compiled in accordance with the regulatory system and in terms of the transaction codes imposed by EU requirements. Examples of real economic types are various forms of tax, consumption expenditure, investment and transfers. This makes it possible to analyse central government activity in the customary economic structure.

## Summary of municipal accounts

### Reporting units

All municipalities in Sweden are covered by the electronic summary accounts (*Räkenskapssammandraget*) which is collected by Statistics Sweden.

### Periodicity

The summary accounts are published annually in September.

### Compulsory or voluntary?

Local authorities are obliged to provide these statistics in accordance with regulations SCB-FS 2006:20, containing the rules of Statistics Sweden on supply of information for statistical purposes on the end-of-year accounts of the local authorities, the Summary accounts (including local government consolidated accounts).

### Main features of survey methodology

The summary accounts are collated by means of electronic forms. As well as the questionnaire itself, the form contains pre-printed data, scrutiny checks and key figures, which are calculated automatically. The key figures are reported back to the respondents in order to ensure quality.

### Survey response rate

All local authorities respond to the survey. Partial non-response occurs to a minor extent in the specification of operating accounts and external expenditure. In these cases the surveys returned are used for grossing to national level.

Quality on a nationwide basis is good at aggregate level. Quality at local government level may be poorer for certain municipalities. The profit and loss account and balance sheet data are of very high quality. Measurement problems can arise in connection with the allocation of overheads and the recording of internal items.

Much of the work of scrutiny is already done when the form is filled in. The municipalities must comment on any checks which show up anomalies or major changes in key figures in special commentary boxes. Summation errors and recording errors cannot arise. Statistics Sweden closely scrutinises the incoming material. Contact is made with most municipalities for the amendment and correction of the data supplied. Because of the sheer volume of the work (approx. 3500 variables), it is not possible to check all variables in the Summary accounts with the same degree of attention.

### Main variables collected

The Summary accounts consist of the following sections:

*Operating accounts.* Presentation of the municipalities' current costs and income during the year. It is the most detailed section, in which the municipalities' activities are recorded broken down by major expenditure and income types. Internal costs (e.g. accommodation costs, capital costs and joint activity) and internal income are allocated to activities.

*Specification of operating accounts.* This section provides information on purchases of activity, grants and transfers with a breakdown by counterpart (from whom the activity is purchased or who receives the grant). Specification of certain income is also included, for example operating grants from central government and the National Labour Market Board. The activity classification is less detailed than in the operating account.

*Investment account.* Investment expenditure and investment income for the year are recorded here. A special entry is included in this section, for example, for the purchase and sale of real estate. The activity classification is less detailed than in the operating account.

*Profit and loss account.* This section contains information on both the municipality and the municipal group. The profit and loss account presents the financial results of the municipality for current activity.

*Balance sheet.* This section contains information on both the municipality and the municipal group and gives a presentation of assets, debts and proprietor's capital.

*Guarantees and other contingent liabilities.* The various contingent liabilities taken on by the municipality are presented here.

*External expenditure.* This section includes costs/expenditure from both operating accounts and investment accounts broken down by type of expenditure.

*External income.* This section includes income from operating accounts and investment accounts broken down by type of income.

## Summary accounts of county councils

### Reporting units

All county councils and regions in Sweden are covered by summary accounts. The inquiry is conducted by the Federation of Swedish County Councils, which is an employers' organisation for all the county councils in Sweden.

### Periodicity

The Summary accounts are published annually in June.

### Compulsory or voluntary?

Local authorities are obliged to provide these statistics accordance with regulations SCB-FS 1999:4, containing the rules of Statistics Sweden on supply of information for statistical purposes on the end-of-year accounts of the local authorities, the Summary accounts (including local government consolidated accounts).

### Main features of survey methodology

Eighteen county councils and two regions, Skåne and Västra Götaland, are included in the inquiry. The Summary accounts are thus a full census, to which all the county councils/regions respond. Some partial non-response arises. In these cases the value is imputed manually by applying the value for the previous year, or the Federation of Swedish County Councils undertakes a plausibility estimate on the basis of similar county councils.

### Main variables collected

The Summary accounts comprise the following parts.

#### *Operating account*

The income in the operating account is allocated to patient contributions and other charges, sale of activity, sale of services, sale of materials and goods, grants received, other income, income outside the activity and internal income. Costs in the operating account are allocated to wages and salaries excluding tax-free benefits, other staff costs, costs for purchased activity, grants provided including transport, materials and services, depreciation and losses on the disposal and writing off of assets, costs outside the activity result and internal costs.

*Investment account:* specified by investment expenditure and investment income.

Investment expenditure is further broken down by buildings and land plus inventories.

*Costs for certain activities* are grouped according to employment policy measures, industrial promotion measures, tourism and public transport.

*Certain cost and income items* also form part of the summary accounts and are specified at the level of individual accounts.

The part *End-of-year accounts data* contains the profit and loss account, the financial analysis and the balance sheet. These follow the accounting practice of these bodies.



## **Economic report on church districts**

### **Reporting units**

The inquiry is conducted for church districts at local level and for diocesan bodies and property boards. The survey covers all church districts at local level with employers' obligations. In order to cover the whole local level, i.e. including church districts with no employers' obligations, the figures collected are grossed up. Diocesan bodies and property boards receive a separate questionnaire.

### **Periodicity**

The economic report is published annually. The material is supplied to the national accounts about nine months after the close of the year.

### **Compulsory or voluntary?**

An obligation to supply data applies, i.e. the inquiry is compulsory.

### **Main features of survey methodology**

The inquiry gives an overview of the finances of the church districts. The report is issued by Statistics Sweden in cooperation with the Church of Sweden – Board of the Church (*Kyrkostyrelsen*) and Association of Parishes in the Church of Sweden (*Svenska kyrkans Församlingsförbund*).

The report contains profit-and-loss accounts and balance sheets for church districts at local level and for diocesan bodies and property boards (which manage real estate assets). For church districts at local level and diocesan bodies the material also includes analyses of financing and a statement of costs and income for operations and for investment.

## **Summary accounts of municipal associations**

### **Reporting units**

The inquiry is conducted for local government federations. All municipal associations respond to the survey.

### **Periodicity**

The summary accounts are published annually in September.

### **Main features of survey methodology**

The inquiry provides an overview of the finances of the municipal associations. The report includes profit and loss accounts, balance sheets and a statement of costs and income for operations and for investment.

## **International trade statistics in goods (2005)**

The purpose of the statistics is to provide information on Sweden's international trade by goods and countries. A consequence of Sweden's membership of the EU was that Statistics Sweden introduced an entirely new system for the publication of data on international trade with effect from January 1995. Up to the end of 1994 the statistics could be based entirely on the data supplied by enterprises to Swedish Customs on all exports and imports of goods. In order to show the statistics to the same extent as previously, data had to be collected from 1995 onwards by the following procedures:

### ***Trade in goods with countries outside the EU (Extrastat)***

For enterprises exporting and importing goods to and from countries outside the EU (third countries) data can be used – as before 1995 – from the export notifications and import declarations which the enterprises supply to Swedish Customs in conjunction with the export and import of goods. That portion of trade in goods for 2005 represented approx. 42 % of the total export value and approx. 29 % of the total import value.

### ***Trade in goods with EU countries (Intrastat)***

Data are collected on a monthly basis from enterprises with total exports of goods to other EU countries or imports of goods from other EU countries to a minimum value of SEK 2 200 000 or exports to a minimum value of SEK 4 500 000. The data supplied by the enterprises are recorded by goods (with the same goods classification as for trade outside the EU) and EU Member State. Data collection, which is organised as a special survey by the name of Intrastat, is developed by Eurostat, the Statistical Office of the European Communities.

### **Link to inquiries conducted at European level**

The statistics on trade in goods with EU Member States and other countries are regulated by the following EU regulations and amendments to them:

#### **Intrastat**

- Council regulation (EEC) no 638/2004.
- Commission Regulation (EEC) no 1982/2004

#### **Extrastat**

- Council regulation (EEC) no 1172/95
- Commission Regulation (EEC) no 1917/2000

#### **Nomenclature goods**

- Council regulation (EC) no 2658/87

#### **Combined nomenclatures**

- Council regulation (EC) no 1719/2005

#### **Countries**

- Council regulation (EC) no 750/2005

**Reporting units**

The suppliers of data to the Intrastat system are defined as enterprises or organisations. The data are obtained from the Swedish Tax Agency (SKV), to which it is compulsory to supply EU VAT data.

As regards the Extrastat system, enterprises trading with countries outside the EU report all exports and imports of goods to Swedish Customs.

**Periodicity**

Monthly reporting and statistics are published by month, quarter and year.

**Results availability**

Statistics Sweden's international trade statistics, i.e. Intrastat and Extrastat, are published partly as advance statistics, 25 days after the close of the reference month, and partly as detailed statistics, 75 days after the close of the reference month. For the detailed statistics volume and price indexes are also given, approx. 80 days after the close of the reference month.

**Main features of survey methodology**

The purpose of the statistics is to provide information on Sweden's international trade by goods and countries.

About 60 % of the Intrastat data are reported on paper forms.

**Sampling frame**

Intrastat: The VAT Register of the Swedish Tax Agency. Data are collected from all enterprises with total exports of goods to other EU countries or imports of goods from other EU countries to a minimum value of SEK 2 200 000 or exports to a minimum value of SEK 4 500 000.

Extrastat: Full census of total record from Swedish Customs.

**Compulsory or voluntary?**

Supply of data is compulsory under the Official Statistics Ordinance (SFS 2001:99) and the regulations of Statistics Sweden (SCB-FS 2001:1) on data for statistics relating to Sweden's trade with EU Member States (Intrastat).

Regulations of Statistics Sweden (SCB-FS 2001:29) on data for statistics on certain transfer of goods.

**Population size**

The population is defined as all physical goods, which are imported into or exported out of the country in trade with other countries.

**Sample size**

Intrastat: all physical goods, which are imported or exported in trade with other EU countries. The inquiry is a cut-off operation and covers 97% of imports and exports. Each month some 300 000 goods items are processed.

Extrastat: total record.

**Survey response rate**

The proportion of data suppliers responding and the proportion of value received are used to estimate the response rate.

Response rates for imports from the EU 2005 were 87 % of companies and 96 % of value. Response rates for exports from the EU 2005 were 91 % of companies and 98 % of value.

**Imputation method**

The collected trade data does not cover the total EU trade, as the survey is a cut-off sample from the total traders and also affected by non-response. Certain enterprises in the survey do not provide data at all or provide incomplete data in due time. This under-coverage and non-response is continuously corrected by supplementing missing data with VAT data of the enterprise concerned.

For 2005 about 1.1 % of the reported export items were afflicted with some type of error. About 1.7 % of the reported import items were afflicted with some type of error.

This supplementary VAT data provides only the monthly total values of goods acquisitions from and deliveries to EU countries. With the help of statistical methods the monthly totals of the individual enterprise is broken down to estimates by SITC commodity groups (Standard International Trade Classification, Rev 3) or by each EU country.

Automatic data correction is integrated in the validation/checking process and used to correct for item non-response. Less important variables, such as type of transaction, are replaced by a type value when the variable is invalid or missing. Important data as goods and country codes are adjusted by the use of conversion keys based on historical data.

Under-coverage and non-response are continuously adjusted for enterprises by supplementing with data from their VAT records and historical Intrastat data. The non-response system is constructed in the SAS statistical programme. The trade of enterprises from which no returns is received because of failure to respond or because their figures are below the threshold is allocated to goods groups and countries in accordance with three different statistical models. Models 1 and 2 are based on a time-series-linked updating method, exponential smoothing, in which model 1 concerns non-response estimation which does not take account of seasonal influences.

Model 2 estimates non-response by taking account of seasonal variations. Model 3 concerns the estimation of small enterprises falling below the threshold and estimation of non-response for enterprises with an uncertain time-series or in a particular industry in which the number of enterprises is less than 10. For model 3, VAT data are used. With the aid of a statistical method Statistics Sweden allocates the enterprise's monthly value to certain goods groups by goods X country level in accordance with SITC, Rev. 3. Hence total trade with EU countries can be allocated to these goods groups and reported in published tables.

The enterprises' EU VAT declarations are used to estimate non-response of Intrastat data and also to reconcile Intrastat data reported. Statistics on industrial production in Sweden are allocated in accordance with the same goods nomenclature (CN8) as the international

trade statistics, which makes possible the combined use of export, import and production data at goods level.

**Grossing method**

Supplementary VAT data with grossing figures to calculate the statistical value.

**Sample coverage**

Cut-off inquiry covering 97% of imports and exports of physical goods in the EU.

**Main variables collected**

The statistical goods code conforms to the Combined Nomenclature (CN). The CN number comprises the first eight digits in the goods code derived from the customs tariff. Partner country (exports: destination country, imports: country of dispatch/origin), transaction type, mode of transport, net weight, quantity other than weight for certain goods, goods value.

The rates of conversion to SEK used are either the rate on the date of delivery or the customs exchange-rate set for the month. Forward-contract rates may not be used. The same procedure applies to Extrastat.

For Intrastat the principle as regards the export of goods is that the country code should be given for the last known recipient EU country. As regards the import of goods the country code stated is that for the EU country of dispatch. The same applies to Extrastat.

## **External trade in services (2007)**

### **Link to inquiries conducted at European level**

The regulation EC-184-2005 regarding the balance of payments includes these statistics (foreign transactions concerning services, wages and transfers).

### **Periodicity**

Quarterly.

### **Results availability**

The results are presented and published by the Riksbank (Sweden's central bank) in the balance of payments. The balance of payment is published quarterly.

### **Sampling frame**

The target population includes all enterprises, public authorities and other organisations which have had foreign transactions concerning services, wages and transfers during the reference quarter.

### **Main features of survey methodology**

At the request of the Central Bank of Sweden, since 2003 Statistics Sweden has compiled statistics on foreign transactions concerning services, transfers and wages. The statistics, which are primarily based on surveys aimed at enterprises, public authorities and other organisations, have replaced the statistics previously compiled by the Central Bank of Sweden on the basis of banks' reporting of foreign payments on behalf of clients.

Foreign transactions and the sectors to be covered by the statistics are defined in accordance with the Fifth Balance of Payments Manual of the International Monetary Fund (BPM5), which is consistent with SNA/93 and ESA/95. Quarterly statistics are compiled on foreign transactions concerning services, wages and transfers, with a breakdown by country of different types of services and transfers and also wages.

The system of surveys does not cover transactions by households. For balance of payments' items (e.g. travel currency and transfers) where households' direct foreign transactions are deemed to be of such magnitude that they cannot be disregarded, supplementary data are collected or models are calculated.

To facilitate the transmission of data, forms have been adapted to take account of respondents' activity and the magnitude of the foreign transactions, resulting in 15 different questionnaires.

### **Population size**

For the 2007 statistics, the sample framework encompassing approximately 47 000 enterprises was drawn up with the aid of data from SCB's business register, the 2006 sample framework, VAT declarations, 2005 business statistics, the register of foreign trade statistics, the register of the Financial Supervisory Board and other registers.

### **Sample size and coverage**

In 2007, a sample of approximately 4 800 units is used, stratified by sector, industry groups and giving an indication of trade in services and size (turnover).

## **Survey response rate and imputation method**

### *Over-coverage etc.*

Of the approximately 4 800 enterprises in the sample, over-coverage (bankruptcy, transfer of activity etc.) is just under 2 %. About 8% of the selected enterprises stated that they never have foreign trade in services.

### *Non-response*

The response rate in the surveys conducted to date has varied between 75% and 85%. In the case of unit non-response, i.e. when data are totally missing for a respondent, non-responses of strata which are the subject of total surveys are compensated by imputations using data from previous surveys and of other strata by compensation using average values.

### *Measurement errors*

It can be difficult/impossible to assess the magnitude of measurement errors.

To reduce the risk of such errors, all the questionnaires are subjected to a logic check. For example, all enterprises which report major changes in the export or import of services are the subject of a more detailed check, through comparisons with other statistical sources and through direct contacts with the enterprises.

### *Random error*

For both exports and imports, random error expressed as a relative average error has varied between 2% and 3% for the major item “other business services”; while for the other main items it has varied between 5% and 10%.

## **Grossing method**

Full census.

## **Main variables collected**

Transaction with foreign countries, portfolio trade, asset and debts etc.

## **The income and costs of the SAS consortia**

Data of the income and costs of the SAS consortia are collected by product in a quarterly survey. The survey is used to obtain data on production and intermediate consumption by product and also export and import data by product. The questionnaire contains questions on income and costs by product with the extra information whether the goods and services are sold to or bought from units in each of the ownership countries of the consortia (Denmark, Norway and Sweden). When deciding each country's income/cost by product the share of ownership is central: share of ownership \* income/cost of product. Export and import by product is then estimated by deduction of the data received for sales/purchase of units in your "own country". This model is used by all three ownership countries. The questionnaire is collected by Statistics Sweden and is distributed to Statistics Denmark and Statistics Norway.

## **Statistical register for vehicles (2005)**

### **Link to inquiries conducted at European level**

There is no EU regulation. The agency responsible for the statistics is Swedish Institute for Transport and Communications Analysis (SIKA). The statistics are produced by Statistics Sweden.

### **Reporting units**

Motor dealers and vehicle owners.

### **Periodicity**

Stock data are recorded annually. Reported data are published quarterly with monthly data. Registrations are recorded on a monthly basis.

### **Results availability**

Production time for the stock statistics is about two months after the year-end. The quarterly statistics are recorded around two weeks after the close of the quarter.

### **Compulsory or voluntary?**

Vehicles are subject to compulsory registration. Supply of data to the inquiry is compulsory under the Official Statistics Act (SFS 2001:99), Statistics Sweden's regulations of the Official Statistics (SCB 2001:100) and Swedish Institute for Transport and Communications Analysis (SIKA) regulations (SIKA-FS 2001:3).

### **Main features of survey methodology**

The purpose of the statistics is to describe the Swedish vehicle population: in the first instance, the stock of vehicles, registrations (number and in certain case their economic value), categories of persons owning the vehicles and vehicle density at regional level.

With effect from the statistics for 1973, official statistics on vehicles subject to registration are based on extracts from the common motor vehicle register for the country. The central registration authority for the motor vehicle register is the National Road Administration.



### **Population and sample size**

The inquiry population consists of the vehicles registered in the Central Motor Vehicle Register of the National Road Administration, which covers passenger cars, goods vehicles, buses, trailers (including caravans), motorcycles, off-road scooters, tractors, off-road vehicles, off-road trailers and motor-driven machines in accordance with the Road Traffic Ordinance (2001:558). This means that only vehicles subject to compulsory registration may be included in the statistics, hence only EU mopeds are included, but not other mopeds. Military vehicles belonging to the State and vehicles used only within fenced-in areas and for which there is no compulsory registration are not covered by the statistics.

Number of units in the population: 7 854 544 according to the stock at 31/12/2005. The number of registrations and deregistrations in 2005 was 762 941. Passenger cars form the largest group at around 5 million vehicles, followed by trailers at around 1 million vehicles.

### **Main variables collected**

Passenger cars, goods vehicles including trailer tractors, buses, trailers including caravans and semi-trailers, motorcycles including EU mopeds, farm tractors and off-road scooters, including snow scooters, are the main units and are shown in the register. The main variables are county, municipality, year/model, make and status.

#### Primary variables common to the main units:

Registration number  
Owner number, postcode, age, sex, owner category  
Municipality code  
Group code (makes code + group number)  
Model code identity  
Year/model  
Registration status  
Data indicating various changes  
Reason for deregistration  
Number of owners  
Leased vehicle indication  
Directly imported vehicle indication  
Type-inspected  
Body code  
Chassis number  
Vehicle designation  
SNI92 code, institutional code  
Commercial transport indication  
Natural/legal person  
Recording month (year-month)  
Registration details stored  
Make code (two letters)  
Institutional sector text for the code  
County code  
“A” region code  
Name of municipality  
Number of inhabitants

County code  
Name of county

Primary variables common to several of the main units:

Power unit  
Type of fuel  
Environmental class  
Service weight, Total weight (kg)  
Vehicle length, width (cm)  
Axle distance 1.2 (cm)  
Type of tractor coupling  
Number of axles  
Indication of equipment of various types  
Type of tractor coupling

Individual variable for all registered vehicles: Direct import  
Individual variable for passenger cars and buses: Number of passengers  
Individual variable for passenger cars: Colour code  
Individual variable for goods vehicles: Charge (registrations)  
Individual variable for motorcycles: cylinder capacity (cc)

## **Investment survey (2006)**

### **Link to inquiries conducted at European level**

The Investment survey is not covered by any EU regulation. The inquiry is produced by Statistics Sweden's Industrial indicators programme.

### **Reporting units**

Investment in industry is the subject of the inquiry. The sampling units are enterprises. In order to record data by industry, enterprises are required to compile separate records by industry/division. An enterprise having several establishments with different industry classifications thus returns data for each of them. The sampling procedure for the investment surveys varies from industry to industry (see below: population and sample size).

### **Periodicity**

The inquiry is conducted three times a year: in February, May and October. Production time for the statistics is about 8-9 weeks, counting from dispatch of the surveys to recording of results.

### **Sampling frame**

The number of enterprises measured in the survey is determined with the aid of the FDB, Statistics Sweden's Business database.

### **Compulsory or voluntary?**

Vehicles are subject to compulsory registration. Supply of data to the inquiry is compulsory under the Official Statistics Act (SFS 2001:99), Statistics Sweden's regulations of the Official Statistics (SCB 2001:100) and regulation SCB-FS 2003:7.

### **Main features of survey methodology**

With effect from 1998 the survey requests details of investment in assets having a calculated economic life of at least one year (before 1998: over three years), as well as reconstruction and improvement works which significantly increase the capacity, standard and economic life of an asset. The survey covers all industries and both implemented investment and anticipated investment, as well as investment in intangible assets, in order to form a complete picture of the enterprises' investment.

The population is drawn from the Statistics Sweden's Business database (FDB). Large sections of the sample frame are subjected to a full census.

### **Population and sample size**

Stratification is applied according to industry and size, measured in numbers of persons employed. All enterprises with over 200 employees are included in the inquiry. Enterprises with 20-199 employees are surveyed by sampling. Enterprises with fewer than 20 employees in industrial activities are not surveyed but are estimated. For the business services industry and construction activity, enterprises with upwards of 10 employees are included; in other industries the cut-off limit is 20 employees.

For real estate companies the sample is based on industry, tax assessment value for owned property and category of owned. The cut-off limit for the sample is SEK 10 millions. All

companies with tax assessment value for owned property more than SEK 200 millions are included.

### **Survey response rate**

If non-response is measured as the proportion of enterprises, which fail to submit a return, this is normally between 10 and 20% in the investment surveys. If instead non-response is measured in terms of SEK invested (rate of coverage), it is less: 3%. This is because additional measures to ensure data collection are targeted selectively at the large companies.

### **Sample coverage**

There is under-coverage of newly launched enterprises in the survey samples. However, major investors in this group of enterprises are covered by supplementary inquiries. Enterprises, which have closed or merged, are subject to a certain degree of over-coverage in the sample. Information on enterprises, which are newly launched, reorganised and closed is recovered from a variety of sources.

### **Imputation method**

The companies are first contacted, to persuade them to supply the missing data. After that data are automatically checked. Finally the missing data is estimated from means of similar companies.

### **Main variables collected**

*New buildings and structures, including extension and reconstruction works (not acquisition of real estate and land).*

*Machinery and equipment, motor cars and buses (including used vehicles). Motor cars and buses are only recorded separately by transport enterprises.*

*Computer software and system development.*

*New cars, busses, aeroplanes for transport companies.*

*Value of newly signed leasing contracts (allocated to transport equipment and machinery and equipment).*

*Costs for research, development and marketing for large companies.*

## Sources for the inventory calculations

### Reporting units

All producers and traders are covered by the inventory calculations.

### Periodicity

The bulk of the inventory statistics are collected on a quarterly and annual basis. For a small number of industries only annual data are collected. However, these statistics are allocated to quarters with the aid of estimation models. The quarterly data are supplied regularly with a time-lag of about eight weeks. The annual statistics are supplied with a time-lag of a year and a half.

### Compulsory or voluntary?

Enterprises are obliged to submit inventory data to Statistics Sweden on request under statutory provisions SFS 1992:668 and SFS 2001:99 (Official Statistics Act). In order to minimise the data reporting workload of enterprises, other administrative sources are used for certain data in the statistics.

### Main features of survey methodology

#### *Agriculture*

Data on inventories in agriculture are produced by the Swedish Board of Agriculture. Final statistics are only produced annually at constant and current prices. Data are also calculated quarterly and allocated to quarters. These calculations are carried out by the Swedish Board of Agriculture as well. The statistics cover various types of cereal and animals for slaughter. Inventories of crops under cultivation are calculated as the difference between crop productions evenly distributed over the year minus farmers' deliveries of plant products. The source of the Swedish Board of Agriculture for the calculation of deliveries is statistics on quantities of grain supplied to the milling industry and the grain trade.

#### *Forestry*

Inventories in forestry include pulpwood, saw timber and forest increment. Statistics on inventories of pulpwood and saw timber are produced by Statistics Sweden. The statistics only include quantities. Conversion to current prices is undertaken on the basis of relevant price data, produced by the National Board of Forestry. Statistics on pulpwood are collected quarterly and on saw timber annually.

Changes in inventories of standing timber are calculated as the difference between total resources at the start of a period and at the close of the period in quantitative terms. The calculations are based on estimates by the Swedish University of Agricultural Sciences (SLU) of average annual gross increment in accordance with the National Forest Survey and total annual drain according to the calculation model of the National Board of Forestry. Prices and valuations are based on standing timber prices, which are produced by the National Board of Forestry. See also the description of sources and calculations for production in forestry.

#### *Mining and manufacturing (2004)*

Statistics Sweden's quarterly statistics on inventories are the source for the calculations of changes in inventories in industry. The data are collected by postal survey in the short-term industrial survey. The inquiry is conducted each month but only provides data on

inventories at each quarter-month. The inquiry is a sample survey. The population is divided in stratas based on kind of activity units and size (number of employees). All companies with more than 500 employees are included in the inquiry.

The sample also covers industrial establishments in non-industrial enterprises. In order to ensure that the statistical results are as industry-specific as possible, activity units are used as the inquiry unit. The number of units surveyed is about 1 300.

The non-response 2001 rate was 22% of the units or 12 % of the value. Enterprises with fewer than 50 industrial employees are not covered. Data on inventories are also collected in the annual business statistics. This inquiry includes all registered non-financial corporations with 50 or more employees. For those enterprises, which are not covered by the survey, register information is used. The statistics are collected in the first instance as documentation for tax assessment purposes. This means that the data must be adjusted so that they conform in valuation terms to the national accounts requirements before they are used in the national accounts calculations.

In both the annual and quarterly surveys data are requested on the volume of opening and closing inventories for materials and supplies, work-in-progress, finished products of own manufacture and finished products of third-party manufacture. Inventory data at constant prices are calculated using an industry-by-industry producer price index as a price regulator for work-in-progress and finished products. For materials and supplies a single price series (IVPI) is created with data obtained from the price index for resident supply. Combined weighting of price series in relation to the IVPI is undertaken on the basis of the outcome of the goods classification by industry of the group statistics for materials and supplies.

In the quarterly calculations a few of the value data in the inventory type statistics are replaced by quantitative inventory statistics. The quantitative data are converted to current and constant prices with the aid of price information. This applies to industries, which have one or a small number of products as intermediate consumption or finished product inventories.

#### *Electricity and heat generating plants, gasworks and waterworks*

Changes in inventories in electricity and heat generating plants, gasworks and waterworks are calculated with the aid of Statistics Sweden's fuel statistics. From these, data are obtained on quarterly volume changes for the various types of fuel. The fuel statistics only contain quantitative data. These are multiplied by the base-year prices in order to obtain the inventory value at constant prices. The value at constant prices is reflatd with the producer price index to current prices.

#### *Construction activity*

Inventory data for the construction industry are drawn from the annual Business statistics. The inquiry covers enterprises with more than 49 employees. The inventory types used in the changes in inventories only consist of materials and supplies. Other inventories are recorded as gross fixed capital formation. The smaller enterprises are estimated with the aid of standardised accounting statements (SRU). The standardised accounting statements only contain rough aggregates of the variables required for the calculations. Official short-term inventory statistics for the construction industry are not yet produced in Sweden.

### *Distribution*

Changes in trade inventories are based mainly on data from Statistics Sweden's inventory statistics for distribution. These are based on quarterly surveys of a sample of wholesale and retail trading enterprises with a minimum turnover of SEK 200 000. A sample is drawn up annually for about 4 500 enterprises from the total population. Enterprises with a turnover exceeding SEK 100 million are subjected to a full census. There is no grossing for enterprises with a turnover of less than SEK 200 000. The data, which relate to opening and closing inventories, are chiefly valued at acquisition prices and are allocated to goods groups. These inventories are deflated taking account of average stock turnover time. In the price conversion data are used for the wholesale trade from the price index for domestic supply and, for the retail trade, the consumer price index stripped of VAT. The difference between opening and closing inventories – change in inventories at constant prices – is then reflatd with the average price index for the quarter. For the goods group Motor and heating fuels in wholesale trade the calculations are based on quantity data from Statistics Sweden's fuel statistics. The values at constant and current prices are calculated with the aid of base-year prices and the average price for the calculation period in question.

### *Other service industries*

Inventory statistics for work-in-progress are collected annually in the Business statistics. The inquiry does not cover enterprises with fewer than 50 employees. However, grossing to total population level is undertaken using standardised accounting statements. The collection of short-term inventory statistics covering other service industries was launched in the first quarter of 2000.

### **Survey response rate**

In the statistical inquiries for which data are collected quarterly, non-response is regularly between 30 and 40% in terms of respondent numbers. If the non-response is measured in terms of value, on the other hand, coverage is considerably higher (80-90 percent). The results are treated as preliminary on first reporting. Updating is in many cases normally carried out in conjunction with the next quarterly reporting, when the updated results are considerably more certain.

### **Main variables collected**

Changes in inventories are measured as the value of accumulated inventories minus the value of withdrawals from inventories and the value of all recurrent inventory losses and are divided into four main groups:

- a) materials and supplies
- b) work-in-progress
- c) finished products of own manufacture
- d) goods for resale.

The inventory type *work-in-progress* includes, for example, crops under cultivation, standing timber, structures not completed, other fixed assets not completed (ships and oil rigs), partially completed investigations in legal cases or consultancy assignments, partially completed film products and partially completed computer programs.

## **11.4 Statistical surveys and other data sources used for the transition from GDP to GNI**

### **Foreign Direct Investments – assets and income (2006)**

Apart from monthly direct reporting from major operators covering revenue amongst other things, the Swedish Central Bank has since 1986 conducted annual sample surveys with the aim of measuring the value of *direct investment assets*, both Swedish-owned abroad and foreign-owned in Sweden, and the returns generated by them. This takes place with a time-lag of one year.

#### **Link to inquiries conducted at European level**

The statistics are produced of Statistics Sweden by direction of the Central Bank of Sweden.

The regulation EC-184-2005 regarding the balance of payments includes these statistics (the foreign direct investments are part of the balance of payments).

The statistics also follow the recommendations for the Balance of Payment from the International Monetary Fund, IMF. (IMF Balance of Payments Manual, fifth edition, paragraph 359.)

#### **Reporting units**

Enterprises report data in an electronic survey.

#### **Periodicity**

Annual. The reference time is 31<sup>st</sup> of December.

#### **Results availability**

The results are presented and published by the Riksbank (Sweden's central bank) in the balance of payments. The balance of payment is published quarterly.

#### **Compulsory or voluntary?**

The enterprises are obliged to supply data.

#### **Main features of survey methodology**

Direct investment is the category of international investment that reflects the objective of a resident entity in one economy obtaining a lasting interest in an enterprise resident in another country.

The aim is to measure the value of *direct investment assets*, both Swedish-owned abroad and foreign-owned in Sweden, and the returns generated by them. This takes place with a time-lag of one year. After 1986 the results were based on random samples. For the enterprises selected, data are collected with the aid of questionnaires and the enterprises are obliged to supply data.

*Definition of direct investments:* A direct investment arise when someone (usually a company), direct or indirect, own 10 percent ore more of one company or commercial real estate in a foreign country.



The direct investments in the survey contain of total equity capital, financial claims and debts within a yield relation and directly owned commercial real estate.

One aim of the survey is to measure also the indirect owning within the consolidated group, for example a foreign subsidiary company's associated and subsidiary companies be an integral part of data reported for direct investment assets in foreign countries (divided per country down to equity interests of 10 %). For foreign direct investments in Sweden, the data contain the whole Swedish consolidated group. Foreign owned Swedish companies have thus answered two questionnaires; one for foreign owning in Sweden and one concerning the companies' ownership in foreign countries. This means that their foreign assets also are a part of the consolidated asset value accounted for as foreign direct investments in Sweden.

As from 1986 the results are based on random samples. For the enterprises selected, data are collected with the aid of questionnaires and the enterprises are obliged to supply data. Data for the reports are based on two survey inquiries. The first measures Swedish direct investments in foreign countries and returns from them. The second inquiry measures foreign direct investments in Sweden and returns generated from them.

### **Population size**

In the population of Swedish assets in foreign countries there are 3 185 companies. The corresponding number for foreign assets in Sweden is 4 855 companies.

### **Sample size**

The survey contains:

- Large actors including commercial bank and insurance companies who are direct reporters to Statistics Sweden for the balance of payment.
- All companies with turnover at least SEK 1 000 millions.
- All companies with at least 500 employees.

From the rest of the population a random sample is carried out.

In 2006 the total sample size was 893 companies for Swedish assets in foreign countries and 1 307 companies for foreign assets in Sweden.

### **Survey response rate**

The non-response for Swedish assets in foreign countries and about 4 % and for foreign assets in Sweden about 6 %.

### **Imputation method**

Some data sullyng companies are contacted for control, correction and change of uncertain data. After that further automatic and manual controls for validity and corrections are carried out.

### **Sample coverage**

Over-coverage amounted 2006 to about 31 % for Swedish assets in foreign countries and about 28 % for foreign assets in Sweden.

**Grossing method**

The method for grossing up to population is straight adjustment upwards within stratas. This means that answers from companies in the survey are multiplied with a factor given by  $N_h/m_h$ , where  $N_h$  is the number of companies in the h-strata and  $m_h$  is the number of answering companies in the h-strata. All estimations are adjusted with regard to the companies' equity interest.

## **Balance statistics for non-financial companies, including statistics for the balance of payment (2006)**

### **Link to inquiries conducted at European level**

The European System of Accounts (ESA95) regulates the financial account and thereby also the Balance Statistics for non-financial companies (BAST).

Within the framework of BAST Statistics Sweden by direction from Sweden's Central Bank (Riksbank) also collects balance statistics for the Balance of Payment (BB-BAST).

### **Reporting units**

Enterprises.

### **Periodicity**

Every quarter of the year.

### **Results availability**

The results are published every quarter by Statistics Sweden, as a part of the financial accounts. The results are available 11 weeks after end of a quarter.

### **Compulsory or voluntary?**

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's regulation SCB-FS 2002:25.

Supply of data for the BB-BAST data is compulsory under the Central Bank Act (1988:1385).

### **Main features of survey methodology**

The Balance statistics (BAST) and the BB-BAST illustrates the significance of the non-financial enterprises' on different financial markets. This is done by reporting balance and transactions of the non-financial enterprises'. The other purpose is to provide data on the enterprises' financial savings to the quarterly financial accounts.

Statistics Sweden is assigned to inquire into some foreign transactions and report opposing country and currencies (BB-BAST). These data are used in the Balance of Payments.

### **Population size**

All non-financial enterprises (sector 110) and the general government public service companies (sector 120) with minimum total assets/liabilities SEK 30 millions. Both active and inactive companies are included in the population. The total population 2007 was 10 110 enterprises. Foundations are not part of the population.

### **Sample size and frame**

Random stratified sample of enterprises with minimum total assets/liabilities SEK 30 millions. There are 10 stratas in total.

Four stratas (strata 7-10) are full census stratas (252 companies in 2006):

- All companies with total assets/liabilities of at least SEK 4.2 billions are part of the survey.

- All companies who have reported at least SEK 1 billions in foreign transactions are part of the survey.

From the rest of the companies a stratified sample is conducted (strata 1-6). The sample frame is determined with the aid of the Statistics Sweden's Business database (FDB). In 2007 the sample size was 771 companies.

### **Survey response rate**

The non-response rate is usually 10-13 % of the companies in the sample stratas. The non-response is about 8 companies (out of 252) in the full census stratas.

### **Sample coverage**

Over coverage is assumed to be zero.

Under-coverage (newly started companies etc) is unknown and the statistics are not adjusted with regard to under-coverage.

### **Imputation method**

- The foreign items are assumed to be zero for companies who reported no foreign items last BAST survey.
- The companies within the fill inquiry (total assets/liabilities of at least SEK 4.2 billions) are imputed the same data as last quarter of the year + interest rate. The transactions and currency exposure are assumed to be same as last quarter.
- Companies selected in the random stratified sample are imputed by means in the strata.

### **Grossing method**

Estimations of the population are made from information from the survey, the individual observations are weighted (inverted sample probability).

The companies below the cut-off (SEK 30 millions) are assumed to have zero assets and liabilities.

### **Main variables collected**

Financial assets

Financial liabilities

Balance

Transactions

Financial derivatives

Lending

Income from interest

Cost of interest

All variables are divided and reported in countries and currencies.

# **Report on compiling Process Table**

## **Introduction**

The compilation process of the NA starts with many different types of data sources as input. Then a series of adjustments to the basic data follows to make them consistent with each other and in accordance with the National Accounts' concepts and methods as described in SNA93 and ESA95. It is possible to calculate three different measures of GDP. They are based on the production, expenditure, and income approaches respectively. In Sweden, however the income approach is not completely independently calculated.

The Process Table shows the various adjustments that are added to input data to produce final balanced figures and shows their relative importance. The table consists of two layers. Layer 1 consists of numbers and Layer 2 provides cross-references to the corresponding sections in the GNI Inventory. The columns are split into two groups, of which the first distinguishes the type of source data; the second separates different kinds of adjustments made.

The Swedish national accounts have been subject to a major revision during 2007. The whole period from 1993 and onwards has been dealt with. The detailed annual compilation of year 2005 was also on the table. The whole new and in many aspects quality improved material was published on 29 November 2007 together with quarterly estimates covering the period up to and including 2007q3.

The revisions affected all sectors in the accounts and resulted in an upwards revision of GDP and its components. The calculations were carried out in a supply and use framework, simultaneously in current and constant prices for the period 2000 and onwards. Earlier years were dealt with in a more condensed way.

This was followed by an updating of the GNI Inventory based on the new estimates for 2005. And the work with the process table started with full intensity during the last months of the year.

## **Preparation for completing the Process Table**

The starting point of the PT was an introduction for the whole NA unit in September 2007. The previous work with the PT in 2002 was briefly presented and the results and their usefulness were shown. Fill-in forms and guidelines were shown. The responsibility for entering the figures was given to the compilers responsible for the various parts of calculations of the NA. Around 25 people have therefore been partly involved in this work. One person has been responsible for putting the whole material together.

The table was broken down into detailed levels so that every person responsible for a part in the process could fill in her/his part. The table was expanded by quite a few rows. The expanded table was put on our intranet in order to make the forms easily accessible so that

the compilers could successively add information into the table as the calculation process went on. This treatment concerned layer 1, quantitative overview, of the Process Table.

When the involved staff had made their contributions the tables were checked so that all components added to the correct values for gross domestic product and gross national income. Some adjustments had to be made before the correct figures were received. The tables were also aggregated to its original size. Some comments made in the tables were also checked and discussed with the people in charge.

A calculating period is quite intense and everybody was not able to fill in the figures directly, but the instructions were to make notes so that it would be possible to add information when time admitted.

When the calculations were ready an overview of the table was made and analysis started in order to check if the different adjustments had been treated in a consistent way. Similar adjustments should be put in the same columns. This was a bit problematic though, it was not easy to classify all adjustments in a consistent way. This is pointed out in more detail below.

The second table, layer 2, was produced after the annual figures were settled. This table deals with references to the ESA inventory.

## **Analysis of the Process Tables**

### **Production measure**

The main source for compilation of GDP by production approach is combined data. Administrative data is used together with surveys in the Structural Business Statistics (SBS). The SBS constitute a harmonized source where all the major companies are investigated by surveys while the others take part in a sample survey and the total figures on turnover and intermediate consumption are caught by administrative data received from the Swedish Tax Agency. Administrative data are registered for the financial industries and for the public sector.

Extrapolations and models are used in some industries. The calculation of trade margins within the supply and use framework is one example, services of owner-occupied dwellings, agriculture, forestry and construction are other examples.

Adjustments on the production side amount to an upward adjustment of value added by 136 billion, which is 5.7 percent of GDP value. The adjustments are 164 upwards and 29 downwards. However, many conceptual adjustments are made already in the processing of the Structural Business Statistics. These adjustments cover extra fringe benefits private use of company cars, PC, own account software, special hidden economy, VAT fraud and data validation.

For NACE A, agriculture, forestry and fishing, a conceptual adjustment has been made for agriculture. The amounts refer to internal (within the same farm) production and consumption of forage plants. For some reason these amounts are included in the accounts from the Swedish Board of Agriculture.

NACE D, manufacturing, has been adjusted for both validation and conceptual reasons. In the table, the structural business statistics (SBS) is registered as the source for both output and intermediate consumption. In the national accounts another source is also used for the detailed break-down of output, the statistics of goods production by industry (IVP). The IVP is used for output of goods and most services while the SBS covers also other output as licenses and total intermediate consumption. The SBS follows accounting rules and intermediate consumption has to be adjusted for software, financial leasing, insurance, other taxes on production etc.

NACE E, electricity, gas and water, is based on two major sources. For output a special survey concerning electricity, and for value added the SBS. Intermediate consumption is in principle a residual item.

Output of NACE F, construction, is in the Swedish NA calculated from the expenditure side. The output figures in the column for surveys and censuses include only the part used in NA from the construction survey and that information concern secondary output. The primary output calculated from expenditure information is registered in the column for extrapolations and models.

NACE I, transport services. Both the output value and intermediate consumption are adjusted for e.g. gross/net treatment of travel agencies, and taxi and haulage administration support agencies.

NACE J, financial services. FISIM is calculated in a model and NACE 67 is also model-based for the time being.

NACE K, real estate and business services. The statistical sources show rentals including heating, but in the NA output is net of heating and instead allocated to household consumption expenditure. Apart from the Structural Business Statistics for NACE 70 we also have two extensive surveys to take into consideration in the NA calculations. They are the Income and cost inquiry for multiple-occupancy buildings, IKU, and the HiB Housing and rental inquiry. Detailed calculations based on the surveys and the real estate taxation register are made for different parts of NACE 70, like owner occupied homes, weekend homes, multiple-occupancy dwellings and tenant-ownership rights and other real estate management.

NACE O, other personal services include some activities where black market transactions exist, and a substantial exhaustiveness adjustment has been made.

## Expenditure measure

In the expenditure approach it is possible to follow the shares from different sources.

		Source value	Share
Surveys and census		916 780	33,4
Administrative records		396 685	14,5
Combined data		361 496	13,2
Extrapolations and models		1 026 499	37,5
Other		231	0,0
Total		2 703 255	98,7
Data validation		8 193	0,3
Conceptual		5 785	0,2
Exhaustiveness		22 559	0,8
Balancing		-3 010	-0,1
Final estimate		2 735 218	100

The column "Other" in the Process Table consists of household expenditure abroad and non-residents expenditures in Sweden. The latter item is negative and reduces the sum of the column. To be able to see the importance of items classified to this column, the sign of the figure of non-residents expenditure in Sweden should be changed.

Extrapolations and models are the largest source for the compilation of GDP by expenditure. Extrapolations are used for some household consumption expenditure. Benchmark year for household consumption is a mixture of annual, 2002, 2004 and in some cases also 1995. 18 per cent comes from gross fixed capital formation and 5 per cent from consumption of fixed capital of general government. For household consumption, the figures for dwellings including heating amount to 38 percent of the value. Other large items are purchases of cars and recreation and culture.

Gross fixed capital formation is compiled for 38 percent by information from combined sources, which are the SBS and surveys. Other surveys account for 24 percent. Extrapolations in the calculation are also used to the same extent. This method is important when investments are calculated for transport equipment and dwellings. Other products like brokerage charges, software and originals are also based by methods.

In the expenditure approach administrative data plays an important role only for alcoholic beverages and fees paid for publicly produced services, mostly on health.

Total GDP for the year 2005 is 2 735 billion SEK. The final adjustment items for validation, conceptual and exhaustiveness amount to 37 billion upwards. It represents 1.3 percent of GDP. However, more adjustments are made in relation to the figures collected but are now taken care of by the primary data processing unit.

Adjustments covered at the NA unit include insurance services, purchased software, financial leasing, FISIM, other taxes on production and hidden activities. The final balancing adjustment amounts to 8 865 million SEK and is added to intermediate consumption.



### **Income measure**

The main source for compensation of employees is the administrative data employers send to the taxation authority every year. This material is used for market producers. The basic information for the government is income titles in the government accounts, also classified as an administrative source.

### **Problems encountered**

To fill the Process Table with figures was somewhat complicated in the beginning, but after some time we learned. It could be difficult to allocate values to the correct columns. There is no clear cut between the different columns and the adjustments made can often be classified as both valuation and conceptual adjustments. It was easier this time though than at the first time a few years ago.

### **Specific questions related to NA compilation**

Quality reports exist for all the main sources described in chapter 11 of the GNI Inventory. For variables collected in small surveys, quality indications can be given in relation to population frame, response rate, cut-offs, methodology, etc.

When annual updates are not possible, the benchmark year is in most cases 2002 or 2004 for household expenditure, but some estimates a benchmark from 1995.

Data validation adjustment. The national accounts use validation against as many other sources as possible.

Of course time series is a very import tool to be used. If a new source is introduced which leads to a different value for some estimates, a time series break is not introduced but the old level is extrapolated with the correct volume change until the new level can be introduced in connection with a major revision.

Sector accounts are also produced. These are however based mainly on the results from the product accounts, which are compiled in a fully consistent system of SUTs.

Ratio checks are also a strong and important tool to be used. The most important one is perhaps the input coefficient which is scrutinized for each activity. Other ratios like earnings per hour per activity, social benefits in relation to earnings are also investigated. Labour productivity is compiled and of great public interest among users.

We try to inform our data suppliers on the adjustments made. The most important source is the Structural Business Statistics. We have very intense co-operation with the suppliers of the SBS. But also other data suppliers get information, but not to the same extent. Employment data and price indices can be discussed at special occasions too. The suppliers of information on the government sector receive some key figures in return and get information in this way.

Balancing adjustment. Current and constant prices are balanced simultaneously. Time series are taken into account. The figures of the product accounts and the sector accounts are in accordance with each other. We use supply and use tables, SUT, and have 400 product groups, of which 129 services and 134 industries in our detailed SUTs.

Some figures are locked in the balancing procedure. Those are very valid from special comprehensive and exhaustive sources like the public sector and from the special energy balances.

No figures are deemed to fit with previously published figures. We try to make the best estimate out of the information available at each specific date.

## **Conclusions**

The Process Table provides the user with a picture of the sources. How much of the output value comes from surveys, administrative sources, extrapolation models and so on. But this pure information does not say anything about the quality of the different sources, an extrapolated figure can be very good. Also administrative sources can be very good, as they are comprehensive and cover the whole population. Surveys, on the other hand, can be affected by all kinds of problems, e.g. cut-offs, sampling problems, response rate and population frame. The drawback of the administrative figures is that it is often impossible for a statistician to have any influence on the variables and the definitions of the material, but the significance of this drawback varies between sources. You need more information about the sources, than what is provided in the Process Tables, to be able to make a correct judgement of the quality of the NA.

Adjustments can be made on a solid basis or roughly. The adjustments made for differences in treatment of software, financial leasing, insurance etc between the source and the NA is made with quite detail while some other adjustments can be more uncertain. An adjustment should not (always) be interpreted as a proof of uncertainty, instead it can show that a lot of work have been put into the figures.

The Process Table is very aggregated with broad industry groups and expenditure categories. The calculations are carried out on a much more detailed level. For some groups/expenditure categories the adjustment items add up to large amounts in the Process Tables, in some cases the adjustments more or less even out. For that reason it is hard to draw correct conclusions when you compare different industries/expenditure categories. However, the PT provides a description of the specific steps in the GNI compilations process.



## Annex D: Framework of the GNI Process Table - Layer 1

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Annex D: Framework of the GNI Process Table - Layer 1

Framework of the GNI Process Table - Layer 1

Compilation of GNI		Level of Detail	Basis for NA Figures										Adjustments				Final estimate	
			Surveys & Censuses	Administrative Records	Combined Data	Benchmark extrapolations	CFM and ratios	CF/CP(M) & Imputed Dw.	Other E&M	Total Extrapol+Models	Other	Total	Data validation	Conceptual	(1) Explicit Cut-off	(1) Explicit exhaustiveness		Balancing
INCOME APPROACH																		
Compensation of employees			117193	1041266	0	0	0	0	287659	287659	0	1446118	18534	0	0	35376	0	1500028
Non-Financial Corporations			16686	654192					249261	249261		920139	17692			35376		973207
Financial Corporations			0	33911					14700	14700		48611	842					49453
General Government			100507	328217						0		428724						428724
Households									13249	13249		13249						13249
NFSH				24946					10449	10449		35395						35395
(2) Gross operating surplus					652083		0	0	0	0	0	652083	0	0	0	0	0	652083
Non-Financial Corporations					461317					0		461317						461317
Financial Corporations					53804					0		53804						53804
General Government					55439					0		55439						55439
Households					81523					0		81523						81523
NFSH										0		0						0
(2) Mixed income					174526					0		174526						174526
Taxes on production and imports					463212					0		463212						463212
Subsidies					54631					0		54631						54631
Residual item																		0
Gross domestic product			117193	1041266	1235190	0	0	0	287659	287659	0	#####	18534	0	0	35376	0	2735218

Annex D: Framework of the GNI Process Table - Layer 1

Framework of the GNI Process Table - Layer 1

Compilation of GNI		Level of Detail	Basis for NA Figures										Adjustments					Final estimate
			Surveys & Censuses	Administrative Records	Combined Data	Benchmark extrapolations	Extrapolation and Models				Other	Total	Data validation	Conceptual	(1) Explicit Cut-off	(1) Explicit exhaustiveness	Balancing	
							CFM and ratios	CFM(PIM) & Imputed Dv.	Other E&M	Total Extrap+Models								
INCOME APPROACH																		
Compensation of employees			117193	1041266	0	0	0	0	287659	287659	0	1446118	18534	0	0	35376	0	1500028
Non-Financial Corporations			16686	654192					249261	249261		920139	17692			35376		973207
Financial Corporations			0	33911					14700	14700		48611	842					49453
General Government			100507	328217						0		428724						428724
Households									13249	13249		13249						13249
NPISH				24946					10449	10449		35395						35395
(2) Gross operating surplus					652083	0	0	0	0	0	0	652083	0	0	0	0	0	652083
Non-Financial Corporations					461317					0		461317						461317
Financial Corporations					53804					0		53804						53804
General Government					55439					0		55439						55439
Households					81523					0		81523						81523
NPISH										0		0						0
(2) Mixed income					174526					0		174526						174526
Taxes on production and imports					463212					0		463212						463212
Subsidies					54631					0		54631						54631
Residual item																		0
Gross domestic product			117193	1041266	1235190	0	0	0	287659	287659	0	2681308	18534	0	0	35376	0	2735218

Annex D: Framework of the GNI Process Table - Layer 1

Compilation of GNI				Level of Details		Basis for NA Figures										Adjustments					Final estimate
						Surveys & Censuses	Administrative Records	Combined Data	Benchmark's extrapolations	CFM and ratios	GFCFMA & Imputed low	Other EMI	Total Extrap-Models	Other	Total	Data validation	Conceptual	(1) Explicit Cutoff	(1) Explicit exhaustiveness	Balancing	Final estimate
O	Other community, social and personal service activities																				
	Output of goods and services (at basic prices)				35644	385	97591				975	28542	28517		163127	93	670		9812		173702
	Intermediate consumption (at purchasers' prices)				16199	2178	59324					10238	10238		88539	1059	-1936		-746	226	87142
	Gross value added (at basic prices)				19405	-1733	37637	0	0	975	18304	18279		74588	-866	2606	0	10558	-236	86560	
P	Private households with employed persons																				
	Output of goods and services (at basic prices)					523						0	0	0	523	0	0	0	174	0	697
	Intermediate consumption (at purchasers' prices)				0	523	0		0	0	0	0	0	0	523	0	0	0	174	0	697
	Gross value added (at basic prices)																				0
(global) FISIM																					
Taxes on products					4516	345940									354456	81	-49		5015		359503
Value added type taxes						251309									251309				5015		256324
Taxes and duties on imports, except VAT					4516										4516	81					4597
Other taxes on products						98631									98631		-49				98582
Subsidies on products					12447										12447						12447
Residual item															0						
Gross domestic product				450289	539228	1059863	-763	165545	246883	-87857	323808	219336	2594520	-19853	80978	0	88435	-8865			2735218

Annex D: Framework of the GNI Process Table - Layer 1

Compilation of GNI		Level of Details		Basis for NA Figures										Adjustments					Final estimate	
				Surveys & Censuses	Administrative Records	Combined Data	Benchmark estimates	CFM and ratios	Extrapolation and Models		Other	Total	Data validation	Conceptual	(1) Explicit cut-off	(1) Explicit exhaustiveness	Balancing			
EXPENDITURE APPROACH																				
Total final consumption expenditure		769152	223442	182353	346265	2125	219671	277014	845075	-1783	2027356	-4553	5785	0	22459	0		2051050		
Household final consumption expenditure		291414	46491	151033	346265	2125	167056	222003	72449	-1783	1545944	-979	4495	0	22559	0		1282119		
01 - Food and non-alcoholic beverages											151033							153206		
02 - Alcoholic beverages, tobacco and narcotics		18822	17960	2626	62168				0		39428	-1434	4495		3706			46166		
03 - Clothing and footwear					62168				62168		62168	-42						62126		
04 - Housing, water, electricity, gas and other fuels		69548		1651	5385		167056	108821	27062		347910	-69			673			348514		
05 - Furnishings, household equipment and routine household maintenance				14085	5878				5878		60528	210			1057			61786		
06 - Health		14963			5284			4045	9329		38377				1621			39928		
07 - Transport		54692		73693				56669	130662		185054							185054		
08 - Communication		39660			3776						43445				854			44298		
09 - Recreation and culture		19250			9773			3628	107201		143023	178			953			144298		
10 - Education		2784			591				591		3375				3375			3375		
11 - Restaurants and hotels		60560							0		60566	10371			70626			70626		
12 - Miscellaneous goods and services		11986	18930	15	39217	2125		50540	91862	-1783	122814	277			529			123621		
Transition to national concept									0		-1783				-1783			-1783		
NPSH final consumption expenditure		4413	22606				1395	17223	18618		45637		597					46234		
General government final consumption expenditure		473325	163345	0			51220	37788	89008		726676	-3674	693		72697			72697		
Gross fixed capital formation		112053	1776	179143	0	0	0	104164	180919	1304	475885	0	0	0	0	0	0	475885		
1 - Products of agriculture, forestry, fishing and aquaculture		15136		12329					18177	1591	157088							157088		
2 - Metal products and machinery equipment		415							415	31	157088							157088		
3 - Transport equipment		4316		0	0			40562	40562	0	44878							44878		
4 - Construction of housing		292525	0	0	0			47732	0	0	76957							76957		
5 - Other constructions		976		56814	0	0		139	9497	372	115291							115291		
6 - Other products		14744	3815		0			15731	64951	0	80086							80086		
Changes in inventories		-4574									-4574							-4574		
Acquisitions less disposals of valuables																				
Exports of goods and services		869889	442512		0			3320	3320		1315721	17658	0		0			1333379		
Imports of goods and services		203040	442512		224				95336		320046	17658						346686		
Imports of goods and services		832750	280045		0			3184	3184		1115979	4912	0		0			1120891		
Residual item		289134						1990	1990		1990							6902		
Gross domestic product		913770	396685	361496	346265	2125	219671	381683	1026499	231	2698681	8193	5785	0	22559	0		2735218		





Annex D: Framework of the GNI Process Table - Layer 1

Framework of the GNI Process Table - Layer 1

Compilation of GNI	Level of Details	Basis for NA Figures						Adjustments					Final estimate			
		Surveys & Censuses	Administrative Records	Combined Data	Benchmark extrapolations	CFM and ratios	CF/CPM) & Imputed Div.	Other E&M	Total Extrapol-Models	Other	Total	Date validation		Conceptual	(1) Explicit cut-off	(1) Explicit exhaustiveness
Gross domestic product																2735218
Gross National Income																
Compensation of employees received from the rest of the world																2597
Compensation of employees paid to the rest of the world																2597
Property income received from the rest of the world																263615
Property income paid to the rest of the world																263615
Taxes on production and imports																270632
Subsidies																8187
Gross national income																12482
Gross national income			0	0	0	0	0	0	0	-4123	0	0	0	0	0	2731095

(1) Explicit cut-off and exhaustiveness adjustments Further detailing of these adjustments could be introduced from the "Tabular Approach"

(2) Gross operating surplus- Member States that have detailed source data (independent) income measures, such as Ireland, France, and the UK, the level of details of the gross operating surplus must be increased to include a breakdown by sectors

Annex D: Framework of the GNI Process Table - Layer 1

Framework of the GNI Process Table - Layer 2

Compilation of GNI	Level of Details	Basis for NA Figures							Adjustments					Final estimate			
		Surveys & Censuses	Administrative Records	Combined Data	Benchmark extrapolations	CFM and ratios	CFP(PM) & Imputed Dv.	Other EM	Total Extrap-Models	Other	Total	Data validation	Conceptual		(1) Explicit Cut-off	(1) Explicit exhaustiveness	Balancing
Gross domestic product																	
Gross National Income																	
Compensation of employees received from the rest of the world																	
Compensation of employees paid to the rest of the world																	
Property income received from the rest of the world																	
Property income paid to the rest of the world																	
Taxes on production and imports																	
Subsidies																	
Gross national income																	

(1) Explicit cut-off and exhaustiveness adjustments - Further detailing of these adjustments could be introduced from the "Tabular Approach"

(2) Gross operating surplus - Member States that have detailed source data (independent) income measures, such as Ireland, France, and the UK, the level of details of the gross operating surplus must be increased to include a breakdown by sectors