

# FINLAND

## ESA INVENTORY 2004

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## *Chapter 1 Overview of the system of accounts*

### *1.1 Introduction*

Finland's economic territory comprises Finland's geographic area in accordance with the boundaries of the State (including Åland) but excluding the premises of foreign missions and consulates and supranational and international organisations on Finnish territory. Finland's separate territories in the rest of the world (embassies, consulates, research stations, etc.) are counted as part of Finland's economic territory. Also counted as part of this

territory are national air space and territorial waters, vessels, aircraft and other movable equipment owned by hauliers domiciled in Finland.

The description of the Finnish national accounts approach contains the sources and methods with numerical examples used for the compilation of the statistical year 2004.

### 1.1.1 Organisation of the national accounts in Finland

Finland's national accounts are compiled in their entirety at Statistics Finland. The national accounts are among the key tasks of the Economic Statistics Department, which is responsible for macroeconomic statistics. The unit is divided into three statistics sections. The national accounts section is responsible for compiling the annual accounts and reforming the accounting system. The Financial Statistics section is responsible for financial accounts and calculating general government finances in the national accounts, as well as for insurance and financial institutions. The Regional Economic Statistics section produces regional accounts according to the annual national accounts levels.

**Table 1: Organisation and tasks of the Economic Statistics Department**

Management (7). incl. co-ordination of national accounts		
National Accounts	Financial Statistics	□□□□□□□□□□ conomic Statistics
- Annual national accounts - Trend Indicator of Output - Supply and Use tables - Input - Output - Capital Stock - Historical Series - Productivity Research - Development of Balance Sheets - Consumer Survey - Agricultural Enterprise and Income Statistics - Economic accounts on Agriculture and Forestry (EU)	- Financial Accounts - EMU debt - Quarterly Financial and non-Financial Accounts of General Government - Financial Institutions' Calculations of National Accounts - Credit Stock Statistics - Financial Statement Statistics on Financial Institutions - Interest Payment Statistics - Deposit statistics - Other Financial Market Statistics - Co-ordination of Authority Data Collection - Finances and activities of municipalities and joint municipal boards	- Regional Accounts - WAR calculations - Regional Input - output tables - Central Government Revenue and Expenditure by Region - Public Financing of Entrepreneurial Activities - Productivity Statistics of non-market services - Regional Indicators - Quarterly Statistics of Municipalities
(29)	(22)	(19)

At the start of 2006, roughly 22 persons were involved in compiling the national accounts and in the reform of ESA 95. Three persons were working full-time on quarterly accounts and the monthly indicator of total output.

Some annual accounts compilers also produced quarterly data. Additionally, three persons produce and develop quarterly sector accounts. There were six compilers and revisers of regional accounts. Six persons compiled Financial Accounts statistics. At the beginning of 2006, around forty of more than 70 staff in the Economic Statistics Department was involved in compiling the national accounts. The majority of these compilers have been educated to university degree level.

Compilation of the national accounts is organised in work units according to specific areas for which individual sector researchers take responsibility. One of the sector researchers is responsible for wholesale and retail trade and for hotels and restaurants, another for transport, a third for the final consumption expenditure of households. A team of about four persons makes summaries of calculations in various phenomenon areas for the aggregate national accounts.

National accounts source statistics are not compiled in the Economic Statistics Department, except for local government financial statistics, economic statistics of agriculture and financial market statistics. Source statistics are produced either in other statistics departments of the organisation, or in part externally. The number of staff at Statistics Finland at the end of 2005 was roughly 1 000 persons.

The compilation organisation of national accounts is being changed as the calculation of final data both at current and fixed prices has now been transferred to the supply and use table environment.

## ***1.2 Revision procedures and timetable for revising and finalising estimates***

### ***1.2.1 Routine revision procedure***

Several versions of the national accounts are prepared for each statistical year. All data available to date are utilised so that the national accounts become progressively more exact. Definitive figures are produced two years after the end of the statistical year.

Uniform series according to ESA95 start from the year 1975.

Integrated supply and use tables beginning in 1995 were produced at the turn of 2002-2003, in which supply and use (the balance of resources and expenditure items) in the national accounts are balanced product-by-product. From the beginning of 2006 constant price supply and use tables were also taken into use from 2001 onwards. This reform eliminated from the definitive figures the statistical difference between supply and demand at current prices. At the start of 2006 the previous year's prices and chain indices were introduced to the calculation of constant price figures.

### ***1.2.2 Timetable for revisions and finalising estimates***

The first preliminary data for year  $t$  will be ready at the end of February in year  $t+1$ . This first version is less comprehensive than the national accounts proper. While the contents of the first version will correspond to the quarterly national accounts, it will also contain the first version of sector

accounts for all sectors. The data for the final quarter of the previous year will be published at the same time.

A second version will be produced in the first half of July in year  $t+1$ . At that time, the national accounts for year  $t$  will be compiled in their entirety for the first time for all real (non-financial) accounts.

The third version will be ready in January of year  $t+2$ , the fourth, final version in December of year  $t+2$  as a result of product-specific balancing of supply and use tables.

An example of the production times for versions of the national accounts in 2005 according to the current practice.

Version	Month
1	February 2006
2	July 2006
3	January 2007
4	December 2007

When the different versions of the national accounts are prepared, all available data are utilised. Only some data are altered at each version, for example, all accounts for production and generation of income are initially produced in July of year  $t+1$  (Version 2). After this, one or other of the production and generation-of-income accounts of a particular industry will next be revised in January of year  $t+2$ , when almost all the final information becomes available. Version 4 is based on supply and use tables and, consequently, on the balancing of the product level. Before the product level is calculated, the corrections found are made to the industry data. The data at industry level are generally altered in connection with the compilation and balancing of supply and use tables.

Two main factors influence the timetable for compiling the national accounts: user needs and the completion of source statistics.

The principal user of the national accounts in Finland is the Ministry of Finance. It compiles economic surveys in March and August each year, which supply the key background information, needed to formulate the budget. The Ministry of Finance needs the most recent facts available on the development of the economy in order to compile surveys. The Bank of Finland and various economic research institutes also use the latest national accounts data as the basis for economic forecasts.

## ***1.3. Outline of the production approach***

### ***1.3.1 Reference framework***

When preparing Finland's national accounts, the production approach is primary in calculating GDP. Allowance is also made for the expenditure approach when balancing the accounts.

Gross value added at basic prices is equal to the total of gross value added by industry. Definitive figures are calculated and balanced in the supply and use tables on a product-by-product basis. When taxes on products are added to and subsidies on products are deducted from gross value added at basic prices, gross value added at market prices or GDP is obtained.

## *Statistical unit*

In the production approach to preparing Finland's national accounts, the statistical units are the product, the establishment and the institutional unit. An establishment is a production unit belonging to an individual enterprise, or similar unit, situated in one place and mainly producing similar goods or services. The establishment is equivalent to the local kind-of-activity unit (KAU), as defined in ESA 95. The institutional sector, however, remains the core reference and is also the basic framework used for inspections proper to each industry.

## *Classifications*

### **Classification of sectors**

The classification of institutional sectors is the basic classification of national account. The sector classification is used to draw up not only production and generation-of-income accounts, but also the distribution and use of income accounts, and the capital and financial accounts among the accumulation accounts.

### **Classification of industries**

Finland's national accounts total 183 industries at the most detailed accounting level. Production and generation-of-income accounts are compiled by industry. Roughly, 100 industries are used in the preliminary calculations.

### **Classification by product type**

In addition to classification by industry, use is also made of a classification by producer type based on establishments. The main types of producers are market producers and non-market producers. Non-market producers are further divided into own-account final producers and other non-market producers.

### **Classification of products**

The classification of products, comprising 952 product groups, is the basis for final figures. It is based on the CPA classification. The product classification is explained in Chapter 6 and the classification itself is to be found in Appendix 1.

Production accounts and generation-of-income accounts at current prices are prepared under three classifications according to industry, producer type and institutional sector. In addition, the basis for the classification of production by industry is the institutional sector classification. Industry data are also compiled by producer type, even if data on these are usually presented at the level of totals. Cross tabulation occurs both between industry and sector classifications and between industry and producer-type classifications.

## *Main data sources*

The main data sources of the production approach for market producers and own-account producers are structural business statistics and the Business Register, which are used to calculate the various industries. Also used are the many information sources proper to each industry. The main data sources in other non-market production are consolidated accounting data and the Financial Statement and Report of Central Government, and local government financial statistics.

### 1.3.2 Valuation

The calculation unit of the Finland's national accounts is one million Euros but the units in source material have usually been one euro or a thousand euros.

Economic activities are valued mainly in terms of market price, i.e. according to the value by which flows and stocks are actually exchanged or could be exchanged for cash. If market prices are not immediately available, then the market prices for the corresponding goods, services or assets are used. For example, output of owner-occupied dwellings is valued in accordance with the rent levels of equivalent rental dwellings. When prices for the corresponding products are not available, namely for general government non-market services produced, they are valued in terms of what it costs to produce them.

Product use is valued at purchasers' prices. Intermediate consumption includes transport costs, trading margins and taxes on products (including value-added tax, insofar as it is non-deductible). Output is valued at basic prices, i.e. it includes subsidies on products but not taxes on products, transport costs or trading margins.

Economic activities are recorded mainly on the accrual principle. In cases where this is not so, it is stated separately.

The national accounts are compiled mostly using constant prices also. From the beginning of 2006, constant price figures of the previous year have been taken into use. This description treats the accounts as being at current prices.

### 1.3.3 Transition from commercial accounts and administrative concepts to national accounts concepts

The main data source for assessing the output and/or intermediate consumption of many industries is the structural business statistics of the industry concerned. The Business Register, the business income tax register (EVR) and direct survey data are combined in structural business statistics. These statistics are based on concepts of enterprises' profit-and-loss accounts and the EU regulation on structural statistics.

When calculating output, the turnover figure in accordance with structural business statistics is supplemented by changes in stocks of finished goods, own-account production and other operating income. In other operating income, capital gains on sales of fixed assets are separated from other returns of a more permanent kind, such as rental income. Capital gains on sales of fixed assets are not counted as output.

Included in intermediate consumption are the following items from structural business statistics: purchases during the financial year (excluding inventory purchases), purchases of services from other parties, operational leasing, other rents and miscellaneous fixed and variable expenses. Additional staff costs may include intermediate consumption items, such as staff training and recreation expenditure. Structural business statistics data

are adjusted for the national accounts, among other things, by values applying to computer software acquisitions.

Finland's source data are widely based on aggregate data, which are gathered in accordance with accounting data. Business accounting records also serve as the basis of special reports made.

#### ***1.3.4 Roles of direct and indirect estimating methods***

Calculation of output and intermediate consumption in the national accounts is chiefly based on direct estimating methods, i.e. structural business statistics, the Business Register, the final central government accounts, local government financial statistics, banking statistics, insurance corporation statistics and other aggregate statistics. An indirect estimating method would be a price by amount method, for example.

The compilation of Finland's national accounts relies mainly on source statistics drawn up each year. Benchmarks and extrapolation are used to calculate output in just a few industries.

#### ***1.3.5 Principles applied to ensure exhaustiveness***

The output approach is the key compilation method in Finland's national accounts. Inspection at industry level and balancing supply and use tables on a product-by-product basis are relied upon to ensure exhaustiveness.

In practice, the key method to ensure exhaustiveness is to compare information from a variety of sources. Extensive basic data relevant to production include the Business Register, which covers all business enterprises, associations and self-employed persons, but not farm holdings. The exhaustiveness of the register will be extended to include farm holdings from 2007 onwards. Structural business statistics are another exhaustive source used to calculate the gross domestic product. The business statistics database combines all data on enterprises derived from statistical surveys, the Business Register and the business income tax register.

In practice, these sources are supplemented by the recourse to other statistical sources in relation to particular industries. Separate information is obtained from employment and income levels by means of which comparisons are made by checking changes in income levels, productivity and median income levels.

Although basic data sources are of a high quality, the potential remains for random errors or classification errors. Depending on the data sources and type of report, a hidden economy element is factored into particular industries. Special reports and tax audits are used to assess the impact of the hidden economy. Adjustments must be made to figures for construction, trade, transport and communications, and hotels and restaurant services.

Data on general government activities are exhaustive because they contain all units engaged in general government activities.

## ***1.4 Outline of the income approach***

### ***1.4.1 Reference framework and valuation***

The income approach denotes calculation of GDP as the addition of its various components, consisting of compensation of employees, gross operating surplus (including consumption of fixed capital) and other taxes on production less other subsidies on production.

In Finland's national accounts, GDP is not calculated using the income approach because gross operating surplus is not reliable enough as an independent estimate. Gross operating surplus is calculated as a residual in market production, when other income components have been deducted from gross value added.

The income components of GDP are calculated using the same industry and producer type classification as was used for gross value added in the production approach.

Economic activities are recorded on the accrual principle, not on the cash-basis principle. Wages and salaries paid and employers' social contributions are recorded for the time when the work is performed and the compensation of employee obligation is in effect.

### ***1.4.2 Transition from commercial accounts and administrative concepts to ESA95 national accounts concepts***

The concept of wages and salaries in business accounting and various source statistics is generally the same as in the national accounts. An obvious exception is benefits in kind. In the national accounts, any untaxed benefits in kind (which in commercial accounts are not always included in wages and salaries, but may be part of other business activities' expenses or additional staff costs) are treated as benefits in kind. On the other hand, the employee stock options, which in some source data, are included in wages and salaries, do not count as benefits in kind from the standpoint of the national accounts.

In commercial accounts and much of the source data, the concept equivalent to employers' social contributions is non-wage labour costs, which are not usually differentiated by payment type. In the national accounts, contributions of this kind are usually calculated by industry on a so-called percentage basis. In this case, the difference between non-wage labour costs and employers' compulsory contributions calculated by a percentage method is recorded as voluntary social contribution.

Consumption of fixed capital is calculated in national accounts by means of the capital stock model alone and commercial account write-offs are not used.

### ***1.4.3 Roles of direct and indirect estimating methods***

Compensation of employees is calculated in Finland's national accounts for many industries by the direct estimating method, i.e. there are aggregate data available. Such data consist of structural business statistics, the Business Register, the local government financial statistics, consolidated accounting data and the Financial Statement and Report of Central Government,

banking statistics and insurance corporation statistics. Some industries use an indirect estimating method, such as price by volume type estimates in which the average hourly pay is multiplied by the number of hours worked.

Employers' social contributions by industry and payment type are generally calculated by the so-called percentage payment method, which may be regarded as an indirect method, but total social contributions are calculated using the direct method. The difference is then adjusted to industries.

Consumption of fixed capital is calculated by means of the capital stock model, which is an indirect method.

Other taxes on production and other subsidies on production are obtained from aggregate data, i.e. the calculation method is direct.

Benchmarks and extrapolation have been used to calculate wages and salaries in some industries. This affects part of the forestry, construction of buildings and real estate activities.

#### ***1.4.4 Principles applied to ensure required exhaustiveness***

##### ***Wages and salaries***

Two problem areas arise in ensuring the exhaustiveness of wages and salaries: hidden wages and untaxed benefits in kind.

The valuation of hidden wages is based principally on special reports produced by the consultants Pekka Rytönen Oy in 1995-1998, which in turn are based on tax audit data from the tax authorities. A report was issued for each year and the value of the hidden economy is shown by industry (hidden wages, extra income, disguised distributions of dividends). The hidden economy is also evident to some extent in agriculture, manufacturing, construction, wholesale and retail trade, hotel and restaurant activities, transport, business services and in certain other services.

Calculations about the hidden economy should be treated with caution. There are many gaps in the industry classification of the tax administration's tax audit statistics as not all enterprises have an up-to-date industry, or else it is wrongly designated. Making calculations is also complicated by the fact that only some of those engaged in the hidden economy are randomly selected as the targets of tax audits. Most targeted enterprises are inspected due to negligence in their tax returns or tax payments, or because they were reported. Moreover, it is difficult to allocate tax audit results to the correct statistical year because tax audits can cover several years of tax returns.

In Finland, most benefits in kind are taxable income, subject to tax withholding. In source data used for the national accounts, benefits in kind are generally included in earnings. Sources consist of the Business Register and the structural business statistics.

Not all benefits in kind are taxable earnings. For example, their taxable value does not always equal their real value. In such a case, the excess is included in other expenses (mainly in intermediate consumption). Other benefits in kind outside the tax net in Finland are the commonly available staff discounts and various recreation costs for staff. These benefits in kind not subject to tax are added to earnings.

## *Gross operating surplus and mixed income*

Additions to the income of an enterprise are one of the most important types of information held by the tax administration's tax audit unit as far as the national accounts are concerned. Hidden income can lower output and thereby lower value added and gross operating surplus/mixed income. The consultants Pekka Rytönen Oy have made estimates of the possible size of undisclosed income and its influence on output based on tax audit data from the tax administration.

## *1.5 Outline of the expenditure approach*

### *1.5.1 Reference framework*

In the expenditure approach, GDP is calculated as the total of its expenditure components, or as the total of demand items. These items consist of final consumption expenditure, investments, change in inventories and exports of goods and services, less imports of goods and services.

In the national accounts, GDP is determined based on the production approach. The expenditure approach is also taken into account independently. The difference in GDP, as calculated by the production and expenditure methods of approach, is recorded as a statistical discrepancy in the preliminary national accounts. In the final figures, supply and demand are balanced on a product-by-product basis and no statistical discrepancy occurs.

### *1.5.2 Valuation*

The use of products is valued at purchasers' prices. Final consumption expenditure therefore includes value-added tax and other product taxes, but not subsidies. The products acquired by instalment payments or an equivalent credit system are recorded by their date of purchase.

Gross fixed capital formation includes value-added tax insofar as it is not tax deductible. Investments are recorded according to the date of the transfer of assets. There are three exceptions to this rule in the national accounts. First, financial leasing is recorded as an investment by the industry using it, even if there is no change of ownership. Secondly, own-account investments are recorded when they are produced. Thirdly, construction investments are recorded as they are built and not after completion of the building, when ownership generally changes hands.

Change in inventories is valued at the average price for the year, i.e. the value of opening and closing stock is averaged for the year and then the difference between them is calculated.

Goods imported and exported are valued at their f.o.b. value, i.e. their value when they leave the port of the exporting country. Exports of services are valued at basic prices and imports of services at purchasers' prices.

### ***1.5.3 Transition from commercial accounts and administrative concepts to ESA 95 national accounts concepts***

In calculating government final consumption expenditure, use is made of local government financial statistics, consolidated accounting data and the Financial Statement and Report of Central Government, and profit and loss statements of various corporations. Their concepts are revised to comply with national accounts concepts.

In calculating gross fixed capital formation, use is made of local government financial statistics, consolidated accounting data, the Financial Statement, Report of Central Government, and the profit and loss statements of various corporations. Items in accordance with the national accounts are selected from these concepts.

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

Direct and indirect estimating methods are used to calculate the demand items.

Benchmarks and extrapolation are used in calculating household final consumption expenditure. They are especially based on Household Budget Surveys.

Benchmarks and extrapolation based on special reports are also used to calculate gross fixed capital formation of building refurbishment contained in estimates of investments in the construction of buildings.

### ***1.5.5 Principles applied to ensure exhaustiveness***

The main data sources for the expenditure approach are fairly exhaustive. Calculations are based on aggregate data with respect to goods imported and exported, government final consumption expenditure and partially with respect to gross fixed capital formation, inventories and non-profit institutions serving households. The Household Budget Survey, the key data source for household final consumption expenditure, starts basically from very exhaustive premises, except for some consumer headings known to be problematic, i.e. alcohol. There will be more discussion below about additions to be made to Household Budget Survey data.

The hidden economy does not constitute a significant problem for the expenditure approach. Any consumer goods and services produced by the hidden economy are presumed to be included for the most part in Household Budget Survey data.

Ultimately, the co-ordination and balancing of the production and expenditure methods of approach will be ensured by the supply and use table method, which provides assurances regarding a systematically exhaustive approach, also with respect to the estimation of GDP expenditure components.

## 1.6 *Balancing or integration procedure and main approaches to validation*

### 1.6.1 *GDP and the balancing procedure*

Balancing the national accounts is the stage when the conception of the development and structure of the economy is pulled together. The balancing procedure, which applies to a given year, is never an isolated event. Instead, it is always tied to the preceding time series and especially to the previous year.

Balancing is therefore the pith of national accounts compilation, without which it would be the simple addition of disparate data. Balancing is performed in the same way and to a fairly accurate degree from one year to the next. Preliminary data are balanced at the aggregate level, and the definitive figures are balanced in supply and use tables at the product level.

### 1.6.2 *Stage prior to balancing*

Balancing is preceded by the calculations of sector investigators in the phenomenon areas belonging to each. In these calculations, source data are revised to comply with national accounts concepts. As they compile their own calculations, sector researchers must pay attention to key figures and contingencies. The calculations in each phenomenon area entail paying attention particularly to the following aspects:

- \* changes in value, volume and price from the previous year
- \* corresponding changes from the previous version
- \* changes in absolute levels compared to the previous version
- \* consistency between wages and salaries and employment, measured in terms of a trend in the level of earnings (industry calculations)
- \* consistency between the volume trend and labour input, measured by changes in labour productivity (industry calculations)
- \* consistency between employment and hours worked, measured by hours worked for each employed person (industry calculations)
- \* real disposable income: nominal disposable income deflated by the price index of final consumption expenditure (households)
- \* savings rate: relation of savings to disposable income (general government, households)
- \* net lending level (sector calculations).

### 1.6.3 *Checking of detailed calculation entities*

When the preliminary accounts are balanced, each industry, sector or other calculation entity is sifted through in summary discussions, so-called adjustment sessions. Such discussions involve 2–4 synopsis staff and one or more sector researchers.

Examination of the individual calculation entities occurs as the data near completion. Each calculation entity is sifted through, paying special attention to the above aspects. Besides that, discussion takes place concerning data sources, their availability and usability, changes that have occurred either in data or in calculation methods and other background information bearing on the matter.

The overall picture of the economy gradually takes shape and is refined when most of the calculation entities are complete. The situation is continually monitored and for this reason time stamps are attached to the properties of the computer system. The overall concept can be perceived and come into focus, however, only when all the pieces are in place.

#### *1.6.4 Compilation of the balance of resources and expenditure*

The balance of resources and expenditure, or the national balance of supply and use, combines data illustrating the production and use of goods and services in the national economy.

##### *The production approach*

When all the production and generation-of-income accounts of industries have been calculated, the result is the gross value added of the economy at basic prices as total value added by industry. By adding taxes on products and deducting subsidies on products from this value, GDP at market prices is obtained.

When imports of goods and services from foreign trade calculations are added to GDP at market prices, the aggregate supply is obtained.

##### *The expenditure approach*

In order to calculate aggregate demand, the following items are transferred to the balance (entity from which data are derived is given in parentheses)

- \* Exports of goods and services (from foreign trade calculations)
- \* Private final consumption expenditure (from consumption expenditure calculations of households and the other non-market output item in the production account for non-profit institutions serving households)
- \* General government consumption expenditure (from final consumption expenditure of central and local government and social security funds, i.e. other non-market output of production accounts by industry added to paid social benefits in kind)
- \* Private investment (from total gross fixed capital formation of market output and non-profit activities by industry)
- \* Government investment (from total gross fixed capital formation of government activities by industry)
- \* Change in inventories (from inventory calculations).

The totals of demand items calculated in this way and aggregate supply differ from each other. This difference, a statistical discrepancy, is posted on the demand side and the aggregate demand is obtained, which is then equal to aggregate supply. The total of demand items (without the statistical discrepancy) less imports reflects the GDP estimate calculated through demand.

##### *The income approach*

The third option for calculating GDP, that of independently estimating it from the income approach will not be considered in this context. The totals of the wages and salaries amount from industry calculations and employers' social contributions (compensations of employees) are adjusted in accordance with corresponding data in the household and rest-of-the-world

sectors. This adjustment is made by industry in relation to market producers' wages and salaries and employers' social contributions.

The other income components of value added: consumption of fixed capital and other taxes on production less other subsidies on production are shown in accordance with the totals of the production and generation-of-income accounts by industry. The aggregate totals of taxes and subsidies are determined primarily in accordance with general government data.

While there is no independently calculated GDP estimate as the total of income components, there have been trial calculations made. Structural business statistics data make it feasible to calculate a gross operating surplus estimate in many industries. So far, such calculations have only been examined as an interesting source of comparison, as the gross operating surplus estimate used in such calculations contains numerous risk factors.

### *1.6.5 Preliminary balancing of resources and expenditure*

The current price versions, and the preliminary and definitive versions, of Finland's national accounts for a given year are balanced at the level of balance of resources and expenditure components, and balancing by products in the preliminary version is only used in some individual cases.

When analysing the balance of resources and expenditure, attention is paid to the same features as for individual calculation entities: the value of separate balance of resources items, changes in volume or price from the previous year or deviations from the previous version. Attention is also paid to the level of earnings and to productivity at the level of the overall economy.

A key factor is the statistical discrepancy between supply and demand. In the preliminary version of the national accounts, a modest difference is acceptable and is posted on the demand side. If the statistical discrepancy is too high, efforts are made to modify it. No exact measure of scale exists. In determining the need for adjustment, consideration is given to the absolute level of statistical discrepancy, the absolute change compared to the year before and the change in the influence of the statistical discrepancy on GDP growth (contribution). The statistical discrepancy can be approved in practice if it is not greater than +/- 1% of GDP at current prices and its contribution to the annual change in GDP is not greater than +/- 1%. This approximate degree of balancing lends itself to, and in its way facilitates, the compilation of definitive accounts.

The statistical discrepancy showing the eventual need for balancing in the preliminary version is obtained when the supply and demand of construction figures have been reconciled. The level of construction investment is determined based on the production of new construction, major improvements and real estate activities. The supply of such products at basic prices must first be converted to purchasers' prices. The modification at purchasers' prices for this aggregated product group level definitive version is slightly inexact as the taxes on products for the services in question are not balanced product-by-product. However, the estimated supply at purchasers' prices is regarded at this stage as more reliable and the difference in the construction investment total by industry is balanced by

adjusting industry investment data – which is, as a rule, data for the letting of own property industry.

If it is desired to reduce the statistical discrepancy, there are neither items that will be automatically changed nor automatic procedures for making the change at this stage. First of all, attention is paid to items, which are least reliable because of the data source. Least reliable typically, due to its often deficient basics, is change in inventories. Private investment can also be adjusted. The need for adjustment can sometimes be found in household final consumption expenditure. If adjustment potential is not available in demand components, intermediate consumption is used for adjustments on production and generation-of-income accounts by industry. This changes the GDP level in a way that brings about a greater balance of resources. In principle, data belonging to all industries can be adjusted, but adjustments tend to be limited in practice to a few of the larger industries.

The consequence of balancing the statistical discrepancy is a change in the scale of various economic activities. There are no absolute limits set down for the scale of change. Figures are compared to the original figures or to those of the previous year or previous version. Statistics Finland seeks the highest possible transparency with respect to balancing, preliminary balancing included. It must always be possible to justify any changes made equally to statistics users and source data compilers.

Supply and demand at current prices are calculated as dependent on each other in many ways and the statistical discrepancy is generally fairly easy to keep tolerable. The difference arises from the disparity between intermediate consumption supply and demand and the absence or incompleteness of data relating to the flow of investments or consumer goods. From the balancing standpoint, it is very problematic if statistical discrepancies at constant prices and current prices have a different sign in the time series. Thus, improvement of one usually leads to exacerbation of the other, unless one is in a position to influence price ratios.

Final balancing is made at both current and constant prices.

### ***1.6.6 Balancing definitive resources and expenditure***

At this stage, product range comes into play. This means compiling supply and use tables at current prices and checking the equilibrium of the economy using product balances. There are 947 primary products and five combination products that facilitate balancing. The classification of industries is a little more detail oriented than preliminary accounting – as far as manufacturing is concerned, the 3-digit NACE classification can be used, based on which the total number of industries is 184.

Combining the data of different phenomena areas yields a supply table at basic prices and a use table at purchasers' prices.

By means of price formation items (taxes and subsidies on products, trade and transport margins), supply data can be converted to purchasers' prices and use data to basic prices.

Balancing is based on two identities being valid for supply and use tables:

1. An identity proper to each industry:

Output by industry = Input by industry, or

Output with respect to an industry = Intermediate consumption + value added.

2. An identity proper to each product:

Total supply by product = Total use by product, or

Output with respect to a product + imports = intermediate consumption + exports + final consumption expenditure + gross capital formation.

### *Manual balancing product-by-product*

In practice, the work starts by inspecting basic price product balances, in other words, supply and demand on a product-by-product basis and the difference between them at basic prices. Potential errors in changes in classification are adjusted at this stage, because they are usually the source of the more striking differences. This involves cases in which the values belonging to some other classification must be distributed among several classes of product classification in the national accounts.

The actual adjustments are made at this first manual balancing stage either to supply at basic prices or for use at purchasers' prices, depending on which data are considered more reliable at the time. The supply data are generally more reliable at the product level and, consequently, they change less.

Adjustments are made, as a rule, with a view to bringing supply or use to as close as possible substitute that has reverse difference between supply and use. The coverage of the respective supply and use data is used as the basis. Levels of supply or of intermediate consumption, imports or final use are not affected at this stage.

In practice, changes are made to values at purchasers' prices even if inspection of imbalances is performed at basic prices. This is because price formation is calculated on a product-by-product basis. In most cases, only relative shares of use at purchasers' prices are known for calculating the margins. The values for different margins are calculated using these proportions and price variants are obtained from purchasers' prices to basic prices. By making the changes in use data at purchasers' prices, the intention is to bring at the same time use at basic prices into balance and make the margins belonging to products to correspond to margin totals. Such totals are specific data about taxes on products collected by general government and subsidies on products expended, and the margins produced by trade and transport industries.

The necessary balancing adjustments are checked in respect to household consumption, foreign trade and gross fixed capital formation, insofar as they affect each final use item. When the balancing adjustments have been made, the new balance data are substituted for the data in supply tables at basic prices and use tables at purchasers' prices. Following this, price formation is again calculated, and this time it should be more accurate. Something can be said for the volume of changes because, for example, roughly 290 out of a total of 947 products were balanced manually in 2000.

### *Balancing price formation*

After manual balancing, recourse is to have the automatic balancing of price formation. At this stage, price formation is very close to being accurate and the final adjustment is made so that, by totalling use product-by-product, subsidies and taxes on products are made to correspond to subsidies and taxes paid and collected, and taxes and the margins on trade and transport are made to correspond to the services that yielded the margins produced by the trade and transport industries. In other words, use price formation data is scaled in the correct proportion to supply.

Concerning supply, advancement to the most accurate product level only occurs from basic prices to producers' prices, i.e. customs tariffs and taxes on products (except non-deductible value-added tax) are added to the value of each product at basic prices and subsidies are deducted from it, if they apply. The question of whether they apply or not often will depend on legislation to establish whether supply comes under domestic or foreign output, and which industry produced the product. Price formation is usually known accurately and reliably up to the point of the producer's price.

Supply data are only converted to purchasers' prices at a level at which supply of each product at basic prices is presented at the macroeconomic level. When the modification at producers' prices already exists, use data are sifted for the price formation of each product from producers' prices to purchasers' prices and it is then added, together with the producers' price modification to the values of supply at basic prices. Of course, this modification, too, is useful in order to check the purchasers' price equilibrium.

With the balancing of price formation, the stage is reached at which the product balances at basic prices may have changed somewhat. The changes, in both the absolute and relative sense, are slight. Then again, the differences can now be checked at basic prices and purchasers' prices on a product-by-product basis. The sum of the product-by-product differences at the macroeconomic level is a statistical discrepancy. It shows the extent to which domestic supply and imports at basic prices cover demand items and how well domestic supply and imports at purchasers' prices cover demand items at purchasers' prices. The statistical discrepancy is of the same order of magnitude for both kinds of price. The difference between this and preliminary accounting balancing is that the product balances accurately pinpoint the products affected by the discrepancy.

### *Eliminating statistical discrepancy*

The impact on value added of eliminating a statistical discrepancy is just as great as the statistical discrepancy itself. First of all, products are selected for which the difference, after manual balancing and price formation, is clearly the most in absolute terms. If the difference at the macroeconomic level is positive, i.e. supply exceeds use, the most positive differences are selected. If, on the other hand, the difference at the macroeconomic level is negative, i.e. supply is less than use, the most negative differences are selected. The use and supply of the selected group of products is then re-examined.

To adjust the imbalance, either supply or demand, or in some cases, both are changed. The option selected will depend on how great the statistical

discrepancy happens to be. Only when the difference is on the big side (close to +/- 1% of value added) do we avail of the combined impact of supply and use. Changes tend to be made to use, as a rule, because its level is not considered as reliable as that of supply

Decisions as to which selected group of products will be changed must again be based on the reliability of the product data for each. As a rule, supply and use data of general government sector may be regarded as extremely reliable. At the same time, supply imports and use exports may be considered reliable after preliminary checking. Changes in inventories are usually gone through at the preliminary stage and a fair degree of confidence can be placed in the new level (which is very low, in any case).

Adjustments can commonly be made in the supply of industries operating in the sectors of non-financial corporations, households, financial and insurance corporations and non-profit institutions. For its part, the use of industries operating in the above sectors may be adjusted for intermediate consumption, investments, or the final consumption expenditure of households. A mitigating aspect at this stage is the fact that most products are by nature almost exclusively intermediate product inputs, investment goods or consumer products. When imbalances affect such products, the decision can first be made as to whether consumption data are more reliable than supply data for some reason, and then increase supply at basic prices to the industries producing the critical products. When price formation is in equilibrium, supply at purchasers' prices is also in equilibrium with use at purchasers' prices, when supply at purchasers' prices is retraced. At the same time, value added calculated using the production approach likewise increases/decreases to correspond to that calculated by using final demand.

In commoner cases, when use data are not as reliable, use at purchasers' prices is increased/decreased directly. If the increase/decrease is made to intermediate consumption, the value added of the production approach again increases/decreases to correspond at the macroeconomic level to final use at basic prices. If the increase/decrease is made to final use, the value added of the production approach remains unchanged and the value added calculated through final use rises or falls together with it to the same level. If consumption (final or intermediate consumption) at basic prices is derived once more with the same price formation, supply and use at basic prices will also be in equilibrium.

### *Automatic balancing*

When the statistical discrepancy is eliminated, no further difference between supply and use arises at the macroeconomic level. However, product specific differences may still occur. Differences arising between types of output are also a key factor. Consumption of a domestic market output or imports for a given product will not necessarily correspond exactly to supply or imports of the product on the domestic market, even if the product were to be in equilibrium at the aggregate level (domestic output and imports together). Other non-market output and output for own-account use, on the other hand, are in equilibrium at this stage. Sales (purchases) of other non-market output only involve households and as a rule they, too, are already in equilibrium at this stage.

Automatic balancing is performed using an RAS algorithm programmed in IML language in the SAS system. Supply is not affected and peripheral data for use is established, i.e. levels of intermediate consumption and final use levels. First, so-called certain cases are deleted from the matrices to be balanced, i.e. products which are already fully in equilibrium, and some items for which no further change is wanted (for example, certain investments, households' final consumption expenditure, foreign trade and changes in inventories). The algorithm rapidly reaches equilibrium even if to reach three places of decimals will require a fair amount of reiteration. The difference must be less than 0.001 in a million, or EUR 1 000 per product. Finally, the balanced matrix is combined with the data that were initially omitted.

Directly compiled balance of supply and demand that is fully in equilibrium is obtained from this table, one in which statistical discrepancy does not appear either at the aggregate level or according to type of output. The levels of GDP calculated through production and final use are independently calculated in this version as well. A non-independent estimate calculated through the income approach is made in the balancing to correspond with the estimate obtained through the production and final consumption approaches, but the relationships between the income components of value added may still vary.

### *Other measures*

When the resource and expenditure equilibrium has been approved, the data by industry can be returned to sector researchers. As a rule, changes by industry are minor and they can be made to affect only the operating surplus.

Being that investments change only in conjunction with, or at the same time as intermediate consumption and/or output, new figures for consumption of fixed capital from the capital stock model must be factored into value added. The net operating surplus resulting from the change first changes by an amount equal to the difference between old and new consumption, and a change in intermediate consumption or supply changes it further.

Households' consumption expenditure is converted back to the COICOP classification, and any changes are also made visible through this classification.

### *1.6.7 Balancing sector accounts*

Sector accounts describe production and generation of income of various sectors of the economy, distribution of primary income and redistribution of income, use of income, capital formation and financing from the standpoint of the decision-maker sector. Changes in the assets and liabilities of sectors with their concomitant financial transactions are presented in separately broken down financial accounts.

#### *Balancing between sectors*

Before the levels of items in the resources and expenditure balances are fixed, the current and capital transfer items in the sector accounts can be reconciled so that income received by one sector is always paid by some

other sector. The annual accounting computer system contains a variety of tests showing the scale of the differences.

The following instances occur in the case of current transfers:

1. Regarding data for the two sectors, it was agreed that the data of either sector can be used (other current transfers between central government and local government, for example)
2. Sector data come as the total for other sectors (social contributions and benefits for the household sector, for example)
3. The correct levels of current transfers received and paid are decided separately (interest and dividends, for example, a separate balancing process)
4. One of the sectors is left as a residual when data about other sectors are known (non-financial corporations' non-life insurance premiums and claim payments, for example).
5. The aggregate data of the receiving sector are retained and broken down in the paying sector by separate calculation (direct taxes).

#### *Reconciliation of the balance of resources and expenditure with sector accounts*

The sector accounts total must tally with the resources and expenditure balance. Aggregate quantities presented in the balance generally determine the totals of the following economic activities by sector:

- \* Operating surplus
- \* Consumption of fixed capital
- \* Final consumption expenditure
- \* Gross fixed capital formation
- \* Change in inventories

Data concerning final consumption expenditure are transferred as such from the household final consumption expenditure calculations and non-profit activities are transferred from the production accounts to the sector accounts. General government consumption expenditure is equal to the total of 'other non-market output' and social benefits in kind. Data on change in inventories are also available by sector.

The following balance of resources and expenditure items are determined based on sector accounts:

- \* Wages and salaries equal the aggregate of household and rest-of-world earned income.
- \* Employers' social contributions equal the aggregate of those for all sectors (in practice, no employers' social contributions arise in housing corporations and households sectors).
- \* Taxes on production and imports equal the aggregate tax revenues of general government and rest-of-the-world sectors.
- \* Subsidies equal the aggregate subsidies paid by general government and rest-of-the-world sectors.

#### *Comparison with financial accounts*

Net lending by sector compiled independently using financial accounts, referred to as "Financial transactions, net", is compared to the so-called real

side net lending by sector described above. Financial side net lending can offer useful information about real side net lending by sector. In practice, financial accounts and real side accounts are today compiled at different stages. The former are first compiled in September of the year following the statistical year, so that data concerning them are not yet available in February and July to compile the initial calculations of real side advance data. The timetable will be shortened to June, so that net lending of financial accounts would be available when calculating annual national accounts in the summer.

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

### ***1.7.1 Main data sources***

Statistics on production compiled by Statistics Finland are very exhaustive. The Business Register covers all enterprises and corporations, non-profit and unincorporated enterprises that are employers, whether subject to value added tax or belonging to the preliminary withholding register. Government units are on a separate database. The Business Register does not include agricultural holdings. They belong to a separate register of the Ministry of Agriculture and Forestry. The coverage of the Business Register is to be increased in accordance with the future Regulation on business registers starting from the statistical year 2006, so that it will contain all agricultural holdings, housing, and real estate corporations, for instance.

The Structural Business Statistics are also very exhaustive. The database combines all enterprise data from the structural statistics survey, the Business Register and business income tax material.

Data in the Structural Business Statistics and Business Register are used to compile the national accounts as a means of comparing data about establishments and enterprises at industry level. Likewise, comparisons are made with other available data sources. Although the Structural Business Statistics and Business Register are high quality data sources, classification discrepancies and random errors can occur. Depending on the data sources and analyses, a hidden economy increment is added to industry specific data. Changes in annual levels of volume, productivity and median earnings are used in the final matching of sector specific data sources. Labour input and employment data are required to calculate productivity and median earnings, which thus form one of the foundations for compiling the national accounts.

Data sources applying to general government units are exhaustive. Local government financial statistics contain financial data on all municipalities and joint municipal authorities. Central government data are derived from the central government accounting system. Data concerning social security funds are also fully exhaustive.

During recent years, public-sector units have been gradually transferred to enterprises and from non-market units to market units. The transfers have been precisely recorded to ensure that all units are included in the calculations and that no duplicate calculations arise.

Structural Business Statistics and general government data furnish data regarding not only production and generation of income but about fixed capital formation and changes in inventories as well.

Other data sources of demand items consist of foreign trade statistics, balance-of-payment data and the Household Budget Survey. Household Budget Surveys are not conducted every year and, during interim years, substitute data sources, or interpolations are used. Foreign trade statistics compiled by the National Board of Customs are thought to reach a good level of exhaustiveness. Minor corrections are made for the purposes of the balance of payments and the national accounts in order to attain full exhaustiveness. Statistics on foreign trade in services are compiled at Statistics Finland based on inquiries.

An estimate of the hidden economy is made by utilising special reports, employment comparisons between the Labour Force Survey and the national accounts and tax audit data. Based on such reports, the incidence of the hidden economy in Finland is not very marked. Due to the method of calculation, part of the hidden economy is always incorporated into the national accounts (construction, dwelling services). The results of tax audit data give only an indication, because the inspected cases are not representative samples. Due to the nature of the calculations, an exact evaluation of the hidden economy is not feasible.

### ***1.7.2 Compiling household final consumption expenditure***

The data sources used for household final consumption expenditure are the Household Budget Survey, turnover data about retail trade from various sources, data on organisations in the trade sector and data created through calculating production.

Turnover data of retail establishments by branch of activity are available, as produced by Statistics Finland's Business Register for all key classification level industries. The data are mainly based on data gathered by the tax administration. Such data are not usually available until final consumption expenditure figures are calculated. When evaluating advance data, approximations of industry level turnover variables produced by trade cycle statistics are used.

The Business Trend Statistics on trade have been revised from the start of 1998. In addition to data collected directly from enterprises, other data applying to value added tax and to payment controls regarding employers' social contributions are now collected from tax administration data.

The result obtained is a household final consumption expenditure estimate derived from retail trade statistics. In order to determine the ultimate estimate of national accounts, figures are compared with corresponding final consumption expenditure estimates derived from other sources (for example, the Household Budget Survey) and the best is selected.

In the ideal case, it should be possible to compare authentically final consumption expenditure estimates derived from various data every year. It will not be feasible because, according to currently available information, the Household Budget Survey will be conducted every fifth year, instead of the annual survey tried in the mid-1990s.

A heading link to headings data to be found in the Household Budget Survey is added to the consumption headings in the national accounts. If headings are divided into several national account headings, they are given weightings in accordance with their distribution. In the case of a single heading code,

the weighting = 1. Because product distribution in the Household Budget Survey is considerably more detailed than in the national accounts, most instances conform to the latter case.

By linkage in the above way, data to be found in the Household Budget Survey are converted to (uncorrected) final consumption expenditure to comply with national accounts nomenclature. Some corrections are needed to convert the final consumption expenditure thus obtained into an estimate that corresponds with the national accounts. The first of these is because people living in various institutions are omitted from the Household Budget Survey's base population. The adjustment results in the so-called population-adjusted final consumption expenditure.

Next, corrections are made for differences arising from bias or random alteration and potential differences in concepts and definitions in the Household Budget Survey. In order to estimate the extent of bias, comparisons are made with other basic material on final consumption expenditure calculations. In order to eliminate the effect of bias, a comparison with other basic material is necessary to discern and adjust any items deviating from the reality.

When the final consumption expenditure in Finland of non-resident households is added to the figures, an adjusted final consumption expenditure estimate is reached, deriving from Household Budget Survey data in accordance with national accounts concepts. The estimate obtained is compared with estimates systematically derived from other sources in order to select a final consumption expenditure estimate approved as complying with the national accounts. When calculating definitive figures, the final level of consumption expenditure is determined by balancing supply and use tables.

### **1.7.3 Gross fixed capital formation**

Supply data are obtained for the gross fixed capital formation of residential and other buildings.

Supply of building construction is obtained by adding the cost to the developer, the value added tax on construction and the real estate commissions (including value added tax) to the value of new construction and renovation in the construction sector at basic prices.

New construction data are based on building permits and the prices of completed buildings. Statistics Finland obtains data from the database of the Population Register Centre. These data are used to calculate value and volume. Data available include market prices employed for completed buildings and quality classification based on the detailed structure of various types of building is relied on in order to calculate the volume at current prices.

Permit and pricing data are very exhaustive and include own-account construction. All types of construction are classified so that value at basic prices is obtained also for own-account construction (e.g. small houses, summer cottages, agricultural buildings).

The value of renovation is based on the 2000 Basic Report. Other sources are the volume index of renovation building and data about household final consumption expenditure on renovation construction.

The data sources used for civil engineering are taxation payment control material (at the 4-5 digit level), Statistics Finland's employment, level-of-earnings and price data, advance data from structural business statistics and commercial accounting data at the central and local government levels.

Gross fixed capital formation of construction as well as other investment demand items are calculated by industry. Appropriate supply data are available for such calculations by industry. The majority of gross fixed capital formation calculations are performed by industry using special off-line data and comparing different sources.

A key data source for investment demand by industry is the database combined with Structural Business Statistics, which includes direct survey material concerning the tax administration, the Business Register and Structural Business Statistics. Separate establishment data are to be found in the Business Register. Such combined material can be regarded as very exhaustive. The incidence of the hidden economy is not as probable from the standpoint of gross fixed capital formation as undisclosed turnover, for example.

In addition, there is a variety of different data sources by industry, such as special industry off-line data. Separate calculations are also made about vehicles based on data in the Vehicle Administration Centre. Likewise, centralised calculations are performed about computer software investments. The transfer costs of intangible fixed assets and titles to land ownership, etc., are also calculated centrally.

Investments of general government activities are also based on exhaustive data sources. For central government, the data sources are consolidated accounting data and the Financial Statement and Report of Central Government and, for municipalities and joint municipal authorities, financial statistics. The final level of gross fixed capital formation is determined by balancing supply and use tables.

#### *1.7.4 Estimating the hidden economy*

##### *Traditional underground economy, industries*

During the main revision of the Finnish National Accounts, the figures of the underground economy have been checked and data added to national accounts levels according to the report Finland's Non-Observed Economy (2008). The results are described in the chapter 7.3.

##### *Illegal activities*

In addition, the methods and calculations of estimates of illegal activities were included to the report Finland's Non-Observed Economy 2006 (2008).

As part of major revision of national accounts, Statistics Finland has integrated estimates of illegal activities in the data. Before only some estimates of prostitution and smuggling were included to figures of consumption expenditures and imports.

Now these estimates on prostitution, and smuggling of alcohol and tobacco were revised according the methods in the Non-Observed Economy report and figures of drugs were calculated and integrated to the accounts.

### *Use of tax audit data*

Special tax audit reports have been in use since 1996. Due to the way tax audits are carried out, it has not been easy to use results for the purpose of the national accounts. Tax audits are generally performed on enterprises whose tax dealings have given rise to suspicion.

This means that only a rough evaluation can be made based on tax audits. Tax audit data have been used in conjunction with other sources of data on the hidden economy. Three kinds of income are involved in tax audits: undisclosed wages and salaries, additions to income and so-called disguised dividend distributions. Finland's national accounts are mainly based on the production approach. From that standpoint, the most critical of the three hidden economy items is that of hidden additions to wages and salaries, because it increases aggregate income (and production). The other two undisclosed income items are divisions of value added. Naturally, these two items are important in the income approach.

As was remarked above, a drawback of tax audits is that they are not performed as a rule until tax fraud has been suspected. In only two of the instances in question (taxis, restaurants) were the selected audit cases representative on a given area. Only in these two instances were the audits performed without prior specific reasons. Based on these instances, no generalisations can be advanced without more presumptions. In any event, for the two industries in question the results have been used in the national accounts.

Results for other industries are not as clear and the inspection material only offers an estimate of the upper limit of the hidden economy. The results of tax audits have been utilised with other sources in order to throw light on the hidden economy.

## ***1.8 The transition from gross domestic product (GDP) to gross national income (GNP)***

The transition from gross domestic product to gross national income is made when the compensation of employees paid from the rest of the world to Finland, taxes on production and imports, interest payments, subsidies, distributed income of corporations, reinvested earnings on direct foreign investments, property income attributed to insurance policy holders and land rent. Correspondingly, the same items paid from Finland to the rest of the world should be deducted.

Economic activities between Finland and the rest of the world converge with the balance of payments in the national accounts, except for property income

attributed to insurance policy holders and foreign trade in construction services, which is not included in the national accounts in Finland but in statistics on balance of payments.

### **1.8.1 Compensation of employees**

Both wages and salaries and employers' social contributions are recorded in this item.

#### ***Wages and salaries received from abroad***

The tax payment statistics contain data on earnings obtained from the rest of the world by "natural persons" or households. This figure includes only the wages and salaries of persons employed during a stay less than six months abroad because tax is due on these earnings in Finland. The figure is increased by 50%, in which case it is estimated to include the wages and salaries of all with an employment relationship of less than one year.

Besides the tax payment statistics, there are data about wages and salaries earned in the rest of the world in Statistics Finland's Income Distribution Survey for the year 2000. It made a survey of **untaxed** wages and salaries earned in the rest of the world. Untaxed wages and salaries are earned from employment relationships of 6 to 12 months in duration. According to the survey, untaxed wages and salaries earned in the rest of the world totalled roughly over EUR 100 million in 2000. When it is taken into account that the answers to such survey questions represent an evident selective downward loss, our estimate that wages and salaries total EUR 171.1 million for 6 to 12-month employment relationships in the rest of the world in 2000 may be regarded as satisfactory in relation to the income distribution statistics.

Employers' social contributions received from abroad are estimated as, on average, 16% of wages and salaries received from abroad.

#### ***Wages and salaries paid to the rest of the world***

The figures are based on Statistics Finland's expert estimation. The value is based on median salaries and on an estimate of the numbers of non-residents who have worked in Finland. The estimate puts the number of foreigners working in Finland 17 000 in 2002. According to the estimate, the average period of employment was four months per year and as average earnings, a ten per cent lower pay than the average earnings calculated based on the domestic wages and salaries.

### ***Calculation of employers' social contributions related to foreign wages and salaries***

#### ***1. Employers' social contributions paid from Finland to the rest of the world***

It is assumed that social contributions paid by employers cover foreigners in ratio to the wages and salaries paid to Finnish employees by virtue of the

regulations and agreements in force in the year in question. Table 2 shows the result of the calculation. The calculation of this item is explained in 8.1.

## *2. Employers' social contributions paid from the rest of the world to Finland*

The social contributions paid by employers are calculated as a relative proportion of the wage bill received from abroad so that the proportion used is somewhat lower than that paid in Finland. The calculation of this item is explained in 8.1.

### *1.8.2 Taxes on production and imports*

Taxes on production and imports only occur on items paid from Finland to the rest of the world. They comprise value-added-type taxes (D211), taxes, and duties on imports excluding VAT (D212) paid by Finland to the EU and import taxes on agricultural products recorded as the assets of the European Union. In addition, there is production tax, the so-called sugar/isoglucose charge included in other taxes on products (D219). These items are to be found in final central government accounts, the National Board of Customs and the Ministry of Agriculture and Forestry and Eurostat. Import taxes have been payable to the EU since 1995.

Payments made to the EU based on value-added tax are recorded as value-added tax.

Taxes and duties on imports include – in addition to regular import duties – import duties on agricultural products. Data on these are obtained from the National Board of Customs. Storage and production fees on sugar are also counted as import taxes. Data on these are obtained from the Ministry of Agriculture and Forestry.

### *1.8.3 Subsidies*

Subsidies only occur as items payable to Finland from the rest of the world. They consist of subsidies on products (D31) and other subsidies on production (D39) that have been payable from the EU to Finland. These subsidies are paid to agricultural entrepreneurs, among others.

The main data sources for subsidies on products paid by the European Union are the final central government accounts and special reports. While subsidies paid by the European Union circulate in practice through the State in Finland, they are treated in the national accounts as paid by the European Union. Only government-financed subsidies are recorded as paid by Finland. Total subsidies paid by the European Union and central government are to be found in final central government accounts, where the share financed by the EU is separated. Methods according to the Eurostat decision (15 February 2005) are followed in treatment of EU transfers.

When a time adjustment is made to the Development Fund of Agriculture and Forestry, the aggregate level of subsidies is obtained. Some of the

subsidies are funded by the state of Finland and some by the EU. The key subsidies are the agri-environmental subsidy, the agri-horticultural subsidy and the harvest catastrophe relief.

#### **1.8.4 Interest**

This section also describes the calculation of dividends.

The data sources of property income and expenditure are the Bank of Finland's direct surveys of enterprises. In addition, the Bank's own accounting data regarding foreign capital indemnities and expenditures are used.

The Bank of Finland's statistics department's enterprise surveys are as follows:

Surveys of direct investments;  
 Surveys of foreign receivables and liabilities by sector, including internal foreign receivables and liabilities of enterprises and financial institutions;  
 Surveys of securities directed to securities traders.

The above Bank of Finland surveys are conducted each month. The results of the surveys are recorded on an accrual basis.

Enterprises receive interest income from abroad other than by direct investments of assets made or loans granted to foreign subsidiaries or foreign parent companies, or securities or other investments – loans, deposits or commercial credits.

Interest income and payments due to investments of securities are investigated through surveys of the foreign receivables and liabilities of enterprises conducted monthly, quarterly and annually. These surveys apply likewise to receivables and liabilities between foreign subsidiaries and parent companies. In national accounts, FISIM correction is made for the interest income and payments.

#### **1.8.5 Withdrawals from the income of quasi-corporations**

From 2004, onwards direct investment income from construction abroad has been recorded as withdrawals from the income of quasi-corporations. It is the same amount, which is recorded in construction services in Balance of Payments.

#### **1.8.6 Distributed income of corporations**

Profits distributed by corporations are dividends.

Foreign dividends receivable or payable of enterprises are obtained based on annual surveys of direct investments and they are part of earnings on capital assets. Foreign dividends receivable or payable on securities are to be found in the above surveys applying to foreign receivables and liabilities.

### *1.8.7 Reinvested earnings on direct foreign investments*

Reinvested earnings on direct foreign investments of capital assets are requested in conjunction with direct investment surveys of enterprises annually. These are done by the Bank of Finland's statistics department.

### *1.8.8 Property income attributed to insurance policy holders*

Property income attributed to insurance policy holders (as income) is calculated, since 1998, based on insurance surveys. This item did not occur previously in Finland. This heading is not included in the Balance of Payments. In Finland property income attributed to insurance policy holders is calculated on the rest-of-the-world account only for life insurance, because the number of other primary insurance policies acquired by foreigners in Finland is small, in 2000 insurance premiums of them amounted to EUR 23 million and in 2001 to EUR 34 million.

### *1.8.9 Land rent*

Separate statistics are not compiled for this item in Finland. Instead, it is included in interest income. This item is most likely negligible.

## *1.9 FISIM: Calculation, Allocation and Impact on GNI*

The handling of Financial Intermediation Services Indirectly Measured (FISIM) has been described in the chapter 9. In this chapter has been described the calculation, allocation and impact of FISIM on GNI.

## *1.10 Supervisory and control systems for national accounts*

### *1.10.1 Risk management*

The performance of a regular and comprehensive analysis of **potential risks** in the main data sources and methods used and the application of actions aimed at managing and minimising these risks.

Each year departments make their agreement with the director general on the work and development programme. When the work programme is planned Economic Statistics Department organises meetings with departments responsible for most important source statistics (Business Trends and Business Structures departments). In the annual planning process, there are also meetings with service departments like IT-department.

In addition, in Statistics Finland there is a special steering group of all statistical departments, which discuss and prepares for decision-making issues linked to production of statistics. For the strategy of economic statistics, another steering group follows implementation of the strategy.

Statistics Finland has the annual work programme and release calendar for all statistics as a part of Statistics Finland's normal planning process. They are regularly followed by the directors.

Statistics Finland also has a special (secret) plan for extraordinary circumstances (an emergency plan), which gives priorities which statistics will be produced in extraordinary circumstances: national accounts and its main sources are in first priority group.

In order to maintain and increase good communication between national accounts and source statistics there is a co-operation group with source statistics. During the calculation process of national accounts persons responsible for each source statistics are invited to participate in the so-called adjustment meetings and members of the co-operation group are invited in the information meetings concerning national accounts calculations and results.

There is also a co-operation committee with main users of national accounts. The committee is for information and discussion on important issues going on in the field of national accounts. The group supplies good feedback on the results of national accounts calculations.

Because a lot of staff of Statistics Finland will be retired in the near future attention has been paid to transferring knowledge from old staff to younger (a system for mentoring, improving documentation and developing a system for deputies, see point d).

### *1.10.2 Service level agreements*

The existence of formal **service level agreements** between national accounts units and the units supplying basic statistical data in order to aid proper control and a timely delivery of good quality data.

Formal service level agreements are made with the Board of Customs (foreign trade statistics) and Bank of Finland (responsibility for Balance of Payments, part of financial market statistics etc.). Agreements may be necessary with the Treasury and some other data producers outside Statistics Finland, but until now, they are not made.

Inside Statistics Finland above mentioned work programmes and their regular follow-up in directors' meeting and agreements of each department with the director general are considered adequate and no formal agreements are needed. In addition, above-mentioned annual planning meetings for national accounts with the main source statistics and IT-department serve this purpose.

### *1.10.3 Quality reports*

The regular production of **quality reports** on statistical sources and products.

Statistics Finland follows the principles of the EFQM (European Foundation for Quality Management) model in its activity. The agency is a key corporate member of Excellence Finland.

Statistics Finland observes the European Statistics Code of Practice approved by the European Commission and supports other producers of Official Statistics of Finland in their development of quality and implementation of the Code. Statistics Finland also organises training in matters related to the quality of statistics and quality development.

The quality principles and good practices of statistical work have been gathered into the handbook Quality Guidelines for Official Statistics which is updated at regular intervals of a couple of years. See:

[http://tilastokeskus.fi/org/periaatteet/laadun\\_periaatteet\\_en.html](http://tilastokeskus.fi/org/periaatteet/laadun_periaatteet_en.html)

For published official statistics, there are quality criteria, which consist nine criteria including a criterion that every statistics should contain a quality report. So-called quality descriptions are published in the web site of every statistical product (at least in Finnish). There are special guidelines for correction procedures if mistakes have been found in the published data. Main source statistics (e.g. SBS and business register) make their regular quality reports for Eurostat.

Ethical principles also are closely connected to quality of statistics. Statistics Finland has published Guidelines on Professional Ethics in 2006. The Guidelines are based on the Declaration on Professional Ethics adopted by the International Statistical Institute and reflect its principles from the perspective of the National Statistical Service in Finland.

The purpose of the Guidelines is to explain the general principles governing Statistics Finland's activity and to help resolve ethical problems. Compliance with the principles of statistical ethics is the fundamental obligation of all statistical authorities.

The publication is intended for the employees, customers and stakeholders of Statistics Finland. It is also recommended for people working in other organisations producing statistics. See:

[http://tilastokeskus.fi/org/periaatteet/eettinen\\_opas\\_en.html](http://tilastokeskus.fi/org/periaatteet/eettinen_opas_en.html)

Examples of quality descriptions of statistical products:

[http://tilastokeskus.fi/til/atoi/2006/atoi\\_2006\\_2007-06-28\\_laa\\_001\\_en.html](http://tilastokeskus.fi/til/atoi/2006/atoi_2006_2007-06-28_laa_001_en.html)

[http://tilastokeskus.fi/til/tyti/2009/05/tyti\\_2009\\_05\\_2009-06-23\\_laa\\_001\\_en.html](http://tilastokeskus.fi/til/tyti/2009/05/tyti_2009_05_2009-06-23_laa_001_en.html)

#### *1.10.4 Supervisory controls performed by management*

The documentation of **supervisory controls performed by management** on national accounts compilation.

During the compilation process of the annual national accounts a special team led by the team leader of the annual national accounts checks the calculations made in the meetings where the team, the researcher responsible for each area and statisticians from source statistics participate. For quarterly accounts this kind of checking meetings are organised as well. Information meetings for the whole staff and source statistics are organised when the calculations are almost finished.

In annual national accounts, each sector researcher is responsible to write a report on his/her special area after the calculation round. The report consists besides latest developments in the area concerned also a description of main methodological changes.

During latest years, Economic Statistics Department has developed a system for documentation and controlling of processes of statistics. A project for documentation of working instructions is going on.

A development project for the new IT-system for national accounts is under way. According to the plans, it will produce tools for better documentation of calculations from source statistics to results (the model is taken from the GNI process tables) as well as tools for analysing results.

### 1.10.5 Internal audits

The performance of **internal audits** on the processes of collection and compilation of statistical data.

The internal quality review and auditing system suitable for any statistics production processes in Statistics Finland started 2007. Annually about 10 different statistics are auditing, source statistics for national accounts until now e.g. building cost index, producer price index and producer price index for services, renovation building statistics, statistics on trade and manufacturing inventories. About the national accounts statistics regional accounts have been audited.

The main objectives of the regular statistical audit system are:

- 1) to evaluate and question ways of working, methods and techniques, leading to development proposals at the end of an audit process;
- 2) to identify and search for good practices used by different statistics and disseminate (by the steering group) them at the organisation level;
- 3) to increase knowledge by bringing together experts from different parts of the organisation, and to introduce more discussion into organisational culture. This is a relevant part of the system.

The target comprises the entire production process including planning and management, staff competency, contacts with users, data collection, data processing, dissemination, documentation and archiving, and follow-up, evaluation as well as improvements. Risk management is the main theme throughout the audit procedure. The audit process itself has been designed to be efficient and fast but still useful, and to promote strong participation.

## *Chapter 2 Revision procedures and timetable for revising and finalising estimates*

### *2.1 Revisions policy*

#### *2.1.1 Revisions policy for routine accounting*

Several versions of the national accounts are prepared for each statistical year. The production timetable is given in Section 2.2. All data available to date are utilised so that the national accounts become progressively more exact. Definitive figures are produced two years after the statistical year.

In the old system based on SNA 68, major revisions were also performed on figures at intervals of about five years. They coincided with the change of the base year for fixed-price projections. The transfer to SNA 68 was made in 1979 (base year 1975). Major revisions were performed subsequently in 1984 (base year 1980), 1987 (base year 1985) and 1993 (base year 1990). During the major revisions, the time series was adjusted retroactively with effect to 1975 and in 1984 with effect to 1960.

Three kinds of adjustments were made to the time series in major revisions. First, the errors found were corrected. Secondly, so-called level adjustments were made because of benchmark being set at a new level for the new base year. Thirdly, adjustments were made entailed by changes in classifications.

In the new system based on ESA 95, major revisions may be implemented otherwise than before. Plans will become more specific when the ESA 95 renewal, including supply and use tables at constant prices, is made effective. In calculations according to the yearly changing base year, major revisions will be needed mainly when significant source data compiled at specific intervals, such as the Household Budget Survey, are completed.

#### *2.1.2 Implementation of ESA 95 reform*

When Finland's national accounts were reformed to comply with ESA 95, figures in accordance with SNA 68 for 1975-1997 (the 1997 figures were preliminary) formed the basis of the first stage of renewal. Changes of two kinds were made to the figures. The revisions required by ESA 95 were made to concepts, definitions and classifications, and as mentioned above, a regular major revision was performed around every five years to utilise new data and correct any errors observed. Moreover, special attention was paid in the ESA 95 renewal to incorporating the hidden economy in accounts more exhaustively than earlier. This reform with respect to the entire time series from 1975 was completed at the end of 1999.

In addition to the above checks, the ESA 95 renewal entailed the compilation of an entirely new time series (for example, computer software investments). The base year for the fixed-price time series was changed to 1995.

The figures in accordance with SNA 68 for 1995-1997 were checked in detail during the renewal. The figures for 1990-1994 were also checked for the most part in depth. In a few instances, new figures in accordance with

ESA 95 were obtained by chaining the 1995 level change retroactively to 1990-1994. Figures for 1975-1989 in accordance with ESA 95 were obtained by chaining the level change for 1990 retroactively to 1975-1989. In some instances, a gradual fading out of the differences was also used as an alternative to chaining. In such cases, the existing standard for a given year (e.g. 1975, 1980 or 1985) was retained and any discrepancy between the old and new figures for 1990 (or 1995) was retroactively faded out in linear fashion.

The second phase of the reform was completed at the start of 2003. The system for compiling the national accounts was reformed to be based on supply and use tables. Final figures at current prices were based on product specific supply and use tables with effect from the statistical year 1995. In conjunction with the reform, 2000 was established as the new base year and a number of other changes were made.

In the third stage of the reform, compilation of constant price calculations was revised. In this connection, a yearly changing base year was introduced, use of double deflation in calculation of value added was started and calculation of constant price figures was converted to be based on supply and use tables. Balancing of final figures is made both at constant and current prices in supply and use tables. Double inflated series were re-calculated starting from the year 2000 and time series were revised retroactively until 1975. The results of the third stage of the reform were taken into use at the beginning of 2006.

## ***2.2 Timetable for revising and finalising the accounts***

The first preliminary version for Year  $t$  will be ready at the end of February in Year  $t+1$ . This first version is less comprehensive than the other versions of national accounts. The contents of the first version will correspond to the quarterly national accounts, but will also contain preliminary data of sector accounts for all sectors.

Quarterly accounting applying to other quarters has been turned out since 2002 in less than 70 days after the end of the quarter.

The second version of the annual accounts will be produced in the first half of July in Year  $t+1$ . At that time, the national accounts for Year  $t$  will be compiled for the first time for real (non-financial) accounts and at the accuracy of around 100 industries. Supply and use tables will not be prepared yet.

The third version is ready in January of Year  $t+2$ , and the fourth (definitive) version in December of Year  $t+2$ . The fourth version contains detailed supply and use tables.

Example of production times for different versions of the national accounts of the year 2004:

Version	Month of completion
1	February 2005
2	July 2005
3	January 2006
4	December 2006

In future, it is intended to have final figures ready two years after the end of the statistical year.

When the different versions of the national accounts are prepared, all available data are utilised. Only some data are altered at each version, for example, all accounts for production and generation of income are initially produced in July of Year  $t+1$  (Version 2). After this, one or other of the production and generation-of-income accounts of a particular industry may be revised in January of Year  $t+2$ , when nearly the final information is available.

Two main factors influence the timetable for compiling the national accounts: user needs and the production of source statistics.

The principal user of the national accounts in Finland is the Ministry of Finance. It compiles economic surveys in February and August each year, which supply the key background information, needed to formulate the budget. The Ministry of Finance needs the most recent facts available on the development of the economy in order to compile surveys. The Bank of Finland and various economic research institutes also use the latest data on the national accounts as the basis for economic forecasts.

The most important source statistics have been produced at different stages over the years. As a general trend, statistics are now being produced with greater speed. What follows is a description of the production of key source statistics as applying to statistics for 2003 and 2004.

The previous year's definitive price indices and labour force statistics are available during preparation of the first version (in February of Year  $t+1$ ). In addition, there are preliminary statistics available for the index of wage and salary earnings, production statistics for most agricultural products, felling statistics for commercial timber and timber price statistics, the volume index of manufacturing, the volume index of newbuilding, trade sales statistics, financial statement estimates for local authorities and local government regional authorities, foreign trade statistics and the balance of payments. In the case of some source statistics, available data apply to only part of the year, for example 9, 10 or 11 months. Such statistics are, for example, payment control data relating to value-added tax payments and employers' contributions.

When preparing the second version (in June-July of Year  $t+1$ ), final figures become available, such as agricultural production statistics, felling statistics for commercial timber and timber price statistics, the volume index of newbuilding, trade sales statistics, foreign trade statistics, and payment control data related to value-added tax payments and employers' contributions. Among new data available are housing rent statistics. Preliminary Structural Business Statistics in manufacturing and certain other industries and banking and local government financial statistics are also available.

When preparing the third version (in January of Year  $t+1$ ), the new data include taxation data and insurance company statistics. Final statistics that become available are the index of wage and salary earnings, banking statistics and financial statistics of local authorities and local government regional authorities and the Business Register, Structural Business Statistics for industries, manufactured products statistics, Household Budget Survey

(every third year), accident insurance premium data, statistics on company employee pension contributions, the agricultural enterprise and income statistics and the balance of payments.

When preparing the fourth version (in November-December of Year t+2), no new data or materials are available unless the publication of some source statistics has been unexpectedly delayed. At this stage, product-specific supply and use tables are compiled, which constitute the final national accounts.

## Chapter 3 The production approach

### 3.0 GDP by the production approach

The accompanying table shows the level of the gross domestic product (GDP) in Finland and distribution by industry in 2004.

The proportion of agriculture to overall production in Finland has clearly declined. Fishing and mining and quarrying have always been scanty. Instead, forestry and its associated timber and paper industries have conventionally been the "backbone" of Finland's economy. The metal industry in Finland is also widespread. There has been a marked increase in electro-technical production in the 1990s. Other current key industries in Finland are foodstuffs and chemicals. There has been a strong cyclical fluctuation in the construction sector. The distribution sectors of trade and transportation represent a considerable part of production. Education, health care and social services are almost entirely in the hands of general government.

**Table 2: GDP level and distribution by industry in 2004**

Value added of industries	2004*	2004*
<i>Gross added value at basic prices</i>	<i>EUR mil.</i>	<i>%</i>
A. B Agriculture, forestry, hunting	3 983	3.0
010, 014 Agriculture and related services	1 461	1.1
02 Forestry and related services	2 453	1.9
015 Hunting, trapping and game propagation	69	0.1
B Fishing	65	0.0
C, D, E All industry	34 442	26.1
C Mining and quarrying	378	0.3
D Manufacturing	31 095	23.5
DA Manufacture of food products, beverages and tobacco	2 357	1.8
DB, DC Manufacture of textiles, textile products, leather and leather products	524	0.4
DD Manufacture of wood and wood products	1 373	1.0
DE Manufacture of pulp, paper and paper products, publishing and printing	5 997	4.5
21 Manufacture of pulp, paper and paper products	4 179	3.2
22 Publishing and printing	1 818	1.4
DF Manufacture of refined petroleum products, coke and nuclear fuel	968	0.7
DG Manufacture of chemicals and chemical products	1 924	1.5
DH Manufacture of rubber and plastic products	1 080	0.8
DI Manufacture of other non-metallic mineral products	988	0.7

DJ Manufacture of basic metals and fabricated metal products	3 608	2.7
27 Manufacture of basic metals	1 516	1.1
28 Manufacture of fabricated metal products	2 092	1.6
DK Manufacture of machinery and equipment n.e.c.	3 435	2.6
DL Manufacture of electrical and optical equipment	7 233	5.5
DM Manufacture of transport equipment	902	0.7
DN Manufacturing n.e.c. and recycling	706	0.5
E Electricity, gas and water supply	2 969	2.2
F Construction	7 160	5.4
4501, 4509 Building construction and construction services activities	5 508	4.2
4502 Civil engineering	1 652	1.2
G Trade; repair of motor vehicles and domestic appliances	14 016	10.6
50 Sale, repair and maintenance of motor vehicles; service stations	2 321	1.8
51 Wholesale trade and commission trade	7 078	5.4
52 Retail trade; repair of household goods	4 617	3.5
H Hotels and restaurants	1 946	1.5
I Transport, storage and communications	14 276	10.8
60 Land transport	4 760	3.6
61 Water transport	883	0.7
62 Air transport	803	0.6
63 Supporting and auxiliary transport activities	3 063	2.3
641 Postal and courier activities	1 065	0.8
642 Telecommunications	3 702	2.8
J Financial intermediation and insurance	3 299	2.5
65 Financial intermediation	2 110	1.6
66 Insurance	794	0.6
67 Activities auxiliary to financial intermediation and insurance	395	0.3
K Real estate and business services	23 908	18.1
KA Real estate activities	14 378	10.9
7021 Ownership and letting of dwellings	11 304	8.5
701, 7022, 703 Other real estate activities	3 074	2.3
KB Business activities	9 530	7.2
72 Data processing activities	2 550	1.9
L Administration, compulsory social security	6 550	5.0
M Education	6 484	4.9
N Health and social work	11 205	8.5
851, 852 Human health and veterinary activities	6 509	4.9
853 Social work activities	4 696	3.6
O Other community, social and personal services	4 772	3.6
P Domestic services	105	0.1
TOTAL	132 211	100
Of which primary production (A + B)	4 048	3.1
Secondary production (C + D + E + F)	41 602	31.5
General government services (I + K + L + M + N + O)	23 836	18.0
Private services (G + H + I + J + K + M + N + O + P + 991)	62 725	47.4

### 3.1 Reference framework

When preparing Finland's national accounts, the production approach is primary in calculating GDP. As will become clear from Chapter 6, allowance is also made for the expenditure approach when balancing the accounts.

The gross value added at basic prices equals the total of gross value added by industry. Gross value added at market prices or GDP is obtained from gross value added at basic prices by adding taxes on products and deducting subsidies on products. The definitive levels are based on supply and use tables.

### *Statistical unit*

In the production approach in Finland's national accounts, the statistical units are the product, the establishment, the producer, and the institutional unit. An establishment is a production unit belonging to an individual enterprise, or similar unit, situated in one place and mainly producing similar goods or services. The establishment is equivalent to the local kind-of-activity unit (KAU), as defined in ESA 95.

### *Classifications*

#### **Classification of products**

The basis for the definitive figures is the classification of products, in which there are 952 products. It is based on a Classification of Products by Activity (CPA). The classification of products is explained in Chapter 6 and the classification as such is given in Appendix 1.

#### **Classification of industries**

The number of industries at the most detailed (see 10.1) accounting level in the national accounts is 184 – including financial intermediation services indirectly measured (FISIM). The total is roughly 100 at the preliminary accounting level.

Production and generation-of-income accounts are compiled by industry.

#### **Classification by producer type**

In addition to classification by industry, a classification by producer type based on the establishment is used. Producers fall into three main categories: market producers, other non-market producers and producers for own final use.

#### **Classification of sectors**

Besides the classifications by product, industry and producer type, there is another classification in the national accounts based on institutional sector. This is used to draw up not just the production and generation-of-income accounts but the distribution and use-of-income accounts, and the capital and financial accounts among the accumulation accounts.

The classification of sectors as used in Finland is shown in Section 10.1.

Production accounts and generation-of-income accounts at current prices are prepared under three classifications according to industry, producer type and institutional sector.

Gross value added is obtained as the difference between the output and intermediate consumption of market producers and own-account producers. The gross added value of other non-market producers equals the total of compensation of employees and consumption of fixed capital. This means that output is obtained by adding intermediate consumption to gross value added.

## Main data sources

The main data sources of the production approach as far as enterprises are concerned are Structural Business Statistics and the Business Register, which serve to calculate the various industries. Used are also the many information sources proper to each industry. The main data sources of general government are consolidated accounting data and the Financial Statement and Report of the State and the financial statistics of municipalities and joint municipal authorities.

## 3.2 Valuation

Finland's national accounts have been prepared in Euros since the summer 2002. The unit is one million Euros but the accuracy level of units in source material has generally been one euro or one thousand Euros.

Economic activities are valued mainly in terms of market price, i.e. according to the value by which flows and stocks are actually exchanged or could be exchanged for cash. If market prices are not immediately available, then the market prices for the corresponding goods, services or assets are used. For example, output of owner-occupied dwellings is valued in accordance with the rent levels of equivalent rental dwellings. When prices for the corresponding products are not available, namely for general government non-market services produced, they are valued in terms of what it costs to produce them.

Product use is valued at purchasers' prices. Intermediate consumption includes transport costs, trading margins and taxes on products (including value-added tax, insofar as it is non-deductible). Output is valued at basic prices, i.e. it includes subsidies on products but not taxes on products, transport costs or trading margins.

Economic activities are recorded mainly on the accrual principle. Where an exception occurs, it is stated separately.

The most part of the national accounts are primarily compiled at constant prices, currently at the prices of the previous year and at the prices of the base year 2000. This inventory treats the accounts as being at current prices, not constant prices. Calculations at constant prices are referred to only if needed for calculations at current prices.

## 3.3 Transition from commercial accounts and administrative concepts to national accounting concepts

The approximate equivalence of concepts in the national accounts and in the profit and loss statement of enterprises is illustrated in the following table:

National accounts	Profit and loss account
	GROSS SALES
	- Indirect taxes
OUTPUT at basic prices	= TURNOVER plus change of inventory, plus production for own use and,

	plus other return on business activities, minus capital gains on sales of fixed assets)
- Intermediate consumption at purchasers' prices	- Materials and services and other business expenses
= GROSS VALUE ADDED at basic prices (GDP)	
- Wages and salaries	- Wages and salaries
- Employers' social contributions	- Additional staff costs (excluding direct pensions and items belonging to intermediate consumption)
= GROSS OPERATING SURPLUS	(= OPERATING MARGIN)
- Consumption of fixed capital	- Depreciation and value adjustments
= OPERATING SURPLUS	= OPERATING PROFIT/LOSS
+ Property income and current transfers receivable	+ Financing income (interest, dividends, etc.)
- Property expenditure and current transfers payable	- Financing expenses, direct taxes and dividends paid
= DISPOSABLE INCOME	= PROFIT/LOSS FOR ACCOUNTING PERIOD (before extraordinary items and appropriations but reduced by dividends paid and direct taxes)

The above chart shows only the rough equivalence of concepts.

The main data source for assessing the output and/or intermediate consumption of market producer industries is the Structural Business Statistics of the industry concerned. The Business Register, the business income tax register (EVR) and direct survey data are combined in Structural Business Statistics. These statistics are based on the concepts of businesses' profit-and-loss accounts.

When calculating output, changes in stocks of finished goods, own-account production and other operating income are added to turnover in accordance with Structural Business Statistics. In other operating income, capital gains on sales of fixed assets are separated from other returns of a more permanent kind, such as rental income. Capital gains on sales of fixed assets are not counted as output.

Included in intermediate consumption are the following items from Structural Business Statistics: purchases during the financial year (excluding inventory purchases), purchases of services from other parties, operational leasing, other rents and miscellaneous fixed and variable expenses. Staff training and recreational expenditure potentially included in non-wage labour costs are transferred to intermediate consumption by comparing different data sources.

The use of other main data sources is explained separately in each case, e.g. by using the financial statistics of local authorities and associations of local authorities in conjunction with the accounts of local authority corporations.

The share of non-life insurance charge is based on the calculations for output and premium data obtained from the Federation of Finnish Financial Services (output / premiums). This share, the service charge percentage (2006: 47 %) is applied for basic data of premiums available for different sectors in order to attain estimates for intermediate consumption and household final consumption (see B.4). The final use by use categories is balanced in supply and use tables. Rest of the premiums is recorded in secondary distribution of income accounts.

Finland's source materials are widely based on aggregate data, which are gathered in accordance with accounting data. Business accounting records also serve as the basis of special reports made. The Finnish Accounting Standards Board has not given exact value for recording of durable goods as intermediate consumption any more. There is only a general rule for minimum service lives of durable goods. On the other hand, there has to be an obligatory plan of depreciation for tax authorities. Main source for GFCF is SBS that is partly based on survey data. Because the answers are based on bookkeeping data, there is no special question of value limit of durable goods to IC/GFCF. Extra questions in surveys have to be avoided because of minimising response burden. Where a maximum cash amount in Euros is involved, the average values implemented can only be estimated.

### 3.4 Role of direct and indirect estimation methods

Calculation of output and intermediate consumption is chiefly based on direct estimation methods, i.e. Structural Business Statistics, the Business Register, final central government accounts, local authority financial statistics, banking statistics, insurance corporation statistics and other aggregate statistics. An indirect estimation method would be a price times amount method, for example. The table below shows the primary estimation method or data source used for the various industries.

**Table 3. Method or information source primarily used to calculate the output and intermediate consumption of various industries.**

Industry/sector:	Output	Intermediate consumption
A 01 Agriculture, etc.	Price x amount from various sources	Price x amount from various sources
A 02 Forestry	Price x amount from various sources	Price x amount from various sources
B Fishing	Structural business statistics, Price x amount from various sources	Structural business statistics
CDE Manufacturing	Structural business statistics	Structural business statistics
F 4501 Building construction	Price x amount from various sources	Structural business statistics
F 4502 Civil engineering	Structural business statistics, Financial Statement and Report of Central Government, local authority financial statistics	Structural business statistics, local authority financial statistics
F 4509 Construction services	Business Register	Structural business statistics

G Wholesale and retail trade	Business Register and structural business statistics	Structural business statistics
H Hotels and restaurants	Business Register and structural business statistics	Structural business statistics
I Transport, storage and communication services	Business Register and structural business statistics	Structural business statistics
J 65 Financial intermediation	Banking statistics	Banking statistics
J 66 Insurance	Insurance company statistics	Insurance company statistics
J 67 Activities auxiliary to financial intermediation and insurance	Sample of profit and loss statements of enterprises	Sample of profit and loss statements of enterprises
K 701 Real estate activities with own property	Output of Industry 4501 and Business Register	Structural business statistics
K 7021 Ownership and letting of dwellings	Price x amount from various sources	Price x amount from various sources
K 7022 Real estate leasing and management	Business Register and structural business statistics	Structural business statistics
K 7031 Real estate agencies	Business Register and structural business statistics	Structural business statistics
K 7032 Management of real estate on a fee or contract basis	Business Register and price x amount from each source	Structural business statistics
KB Business services	Business Register	Structural business statistics
M Education	Business Register, local authority and local government regional authority financial statistics	Structural business statistics, local authority and local government regional authority financial statistics
N Health and social work	Business Register and structural business statistics	Structural business statistics
O Other social and personal services	Business Register and structural business statistics	Structural business statistics
<b>General government:</b>	<b>Compensation of employees:</b>	<b>Intermediate consumption:</b>
Central government finances	Financial Statement and Report of Central Government	Financial Statement and Report of Central Government
Local government finances	Local authority and local government regional authority financial statistics	Local authority and local government regional authority financial statistics
Social security funds	Insurance corporation statistics and financial statements	Insurance corporation statistics and financial statements
Non-profit institutions	Business Register	Sample of financial statements

### *3.5 Role of benchmarks and extrapolations*

The compilation of Finland's national accounts relies mainly on source statistics drawn up each year. Benchmarks and extrapolation are used to calculate output in the following cases:

In the fishing industry (B), the quantities of catches by spare time anglers are based on surveys conducted every two years. The volumes for the previous year are used for intermediate years. The value of spare time angling in Finland fell sharply in the 1990s and stands at about EUR 50 million annually.

The actual and imputed rents for holiday homes are based on actual housing costs calculated using Household Budget Survey data. The most recent Household Budget Surveys were conducted for the years 1990, 1994-1996, and 2001.

### 3.6 Main approaches taken with respect to exhaustiveness

In Finland's national accounts, the key compilation method is the production approach. Ensuring exhaustiveness is based on checking industry levels and checking equilibrium by product in the supply and use tables.

In practice, the key method to ensure exhaustiveness is to compare information from a variety of sources. Extensive basic material relevant to production includes the Business Register, which covers all business enterprises, associations and self-employed persons, but not farm holdings. Structural business statistics for businesses are another exhaustive source used to calculate the gross domestic product. The business statistics database combines all data on enterprises derived from statistical surveys, the Business Register and the business income tax register.

In practice, these sources are supplemented by the recourse to other statistical sources in relation to particular industries. Separate information is to be found in employment and income levels by means of which comparisons are made by checking changes in income levels, productivity and median income levels.

Although basic data sources are of a high quality, the potential remains for random errors or classification errors. Depending on the data sources and type of report, a hidden economy element is factored into particular products. Special reports and tax auditing data are used to assess the impact of the hidden economy. Adjustments must be made to figures for construction, trade, transport and communications, and hotels and restaurants.

### 3.7 Agriculture, hunting and forestry (A)

	NACE A	Output	IC	GVA	
1	Basis for NA figures	<b>7395</b>	<b>3655</b>	<b>3741</b>	} Data valid.
2	Allowances and adjustments	<b>0</b>	<b>-52</b>	<b>52</b>	
3	Balance-sheet result	<b>7395</b>	<b>3603</b>	<b>3793</b>	
4	Reallocations for national accounting	<b>211</b>	<b>-6</b>	<b>181</b>	} Conceptual adjustment
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>211</b>	<b>-6</b>	<b>181</b>	

5	National-accounting result (rounded)	<b>7606</b>	<b>3597</b>	<b>4009</b>	} Balancing
6	Macroeconomic reconciliation adjustment	<b>-27</b>	<b>6</b>	<b>-33</b>	
7	<b>Final NA estimate</b>	<b>7579</b>	<b>3603</b>	<b>3976</b>	

### 3.7.1 Agriculture and related service activities (01)

The agriculture industry consists of the chief category A Agriculture, hunting and forestry the three digit classes 011 Growing of crops, market gardening, horticulture, 012 Farming of animals, 013 Growing of crops combined with farming of animals, 014 Agricultural and animal husbandry service activities, except veterinary activities.

#### 3.7.1.1 Main data sources

Data applying to physical quantities are gathered from enterprises which receive agricultural products for processing (dairies, slaughterhouses, egg packers), or trading purposes, and from agricultural local-kind-of-activity-units, i.e. agricultural holdings. Harvest figures for growing crops, market gardening and horticulture and information on production for own final consumption are gathered from individual producer units and administrative records (IACS – Integrated Administration and Control System, information on use of arable land). In addition, production figures of small units producing solely for their own final consumption are gathered from producers (by means of Household Budget Surveys).

Most of the accounting data on prices and physical quantities applying to output is gathered by the authority mainly responsible for compiling statistics on agriculture, i.e. the Information Centre of the Ministry of Agriculture and Forestry (TIKE). The data on subsidies derive from administrative registers maintained by TIKE. The data sources are based partly on overall statistics and partly on sample surveys. Some national research institutions, besides research activities, issue statistical data used for accounting calculations in agriculture. Among them are the State Institute of Agricultural Chemistry (VML) for the use (manufacture) of animal feed, the State Research Institute of Engineering in Agriculture and Forestry (VMTT), which compiles agricultural machinery and equipment sales statistics, Agrifood Research Finland/Economic Research (MTTL), which maintains the Farm Accountancy Data Network (FADN) in Finland, and *Kasvistieto*, which collects price data on seasonally grown products.

Intermediate consumption figures relating solely to agricultural production input are obtained from producers. An example of such input is compound feedingstuffs. For data sources on other goods and services used in agricultural production, recourse is to have the agricultural enterprise and income statistics and the Structural Business Register, both of which are compiled by Statistics Finland.

Agricultural enterprise and income statistics are based on simply stratified random sampling and prepared based on the income tax returns and ancillary statistics forms of agricultural self-employed persons. The basic framework

group comprises roughly 70 000 farm holdings from which a sample of about 9 000 is selected. The key sampling criterion used is the total area of arable land cultivated on the holding and the holding's main line of activity. A quota is set for the sample in accordance with Neyman's quota system. The quota variable is the profit of the holding from agriculture. The standard error for the sum total of variables in most surveys used for national accounting purposes is only approximately one percentage unit.

Some agricultural activities – the farming of fur animals, reindeer and bees – are considered as separate accounting entities (other farming of animals) whose source data are gathered by the industry's organisations. Statistical data related to the gathering of wild berries and mushrooms are compiled by Food and Farm Facts as regards the market output. Data on the final consumption of the producers are obtained from the Households Budget Surveys. Food and Farm Facts is a private institution engaged in market research. For agricultural services, accounting relies on Statistics Finland's Structural Business Statistics.

Because accounting calculations applied to agriculture are compiled based on products and product group data, sources other than those mentioned are also used. They are shown in conjunction with the description of various accounting methods.

### *3.7.1.2 Output*

The output value of agriculture is calculated by product or product group. Generally, output value is calculated by the formula  $\text{Value} = \text{Amount} \times \text{Price}$ . The output is evaluated at basic prices. In this case, the subsidies on products are included in its value and product taxes are deducted from the value of production. When a commodity's production is subsidised, the subsidies paid on the product are added to the product's value. The price for accounting purposes can also include the subsidy paid on the product.

#### *Animal husbandry:*

##### *Animal production*

Animal output except for reindeers is calculated based on slaughterhouse statistics, which in turn are based on surveys submitted monthly by all slaughterhouses. Statistics indicate meat production and meat producer prices by animal species. The producer price also includes adjustment payments paid by slaughterhouses to suppliers retroactively after the financial statement. Output from slaughtering at the holding, namely for final consumption by the producer, is to be found in sample surveys conducted by TIKE in June and December. Adjustment payments are not included in this share of output. From the beginning of 2001, quantities of beef included in the slaughterhouse statistics have been obtained from the Bovine Register, which is a part of the Rural Business Register. All slaughterhouses are obliged to submit data on slaughtered beef stock. Slaughterhouse statistics cover over 99% of slaughterings, the rest being covered by the sample surveys by TIKE.

The output is valued at basic prices after adding product subsidies specific to each animal species as given in the Common Agricultural Policy and domestic subsidies. The Integrated Administration and Control System and

the Common Control System of Support serve as data sources. The classification of subsidies into subsidies on products and subsidies on production are based on decisions made by the Working Groups on National Accounts and Agricultural Accounts and Prices.

The statutorily constituted Association of Reindeer Herding Co-operatives (PY) maintains statistics of the number of reindeer in co-operatives and the economy for each reindeer herding year. The Association of Reindeer Herding Co-operatives also keeps statistics on the counted reindeer left alive, the number slaughtered, venison production and the producer price.

Gross fixed capital formation of animals for own use is also counted as output. It is only calculated for bovine animals and swine. Sheep are not considered in Finland for wool production purposes. Instead, wool is considered a by-product of rearing sheep. Horses are considered to be principally for trotting and equestrian events.

Gross fixed capital formation in animals is shown in the section describing gross fixed capital formation.

Changes in the number of livestock during the statistical year that are not classified as capital livestock are treated as stock changes. Data about the number of livestock are gathered by TIKE from sample surveys in December, about the bovine animals from the Bovine Register. The stock changes in the calendar year are valued at average prices available from livestock breeding associations.

The export value of animals is to be found in foreign trade statistics. This item does not include the export of trotting horses.

The statistics on animal production can be considered exhaustive and reliable.

**Table 4: Animal production and output 2004**

Species	Slaughterings in abattoires (meat quantity)t	On-farm slaughterings	Producer price	Slaughterin gs, total	Gross fixed capital formation	Exports of live animals	Change in stocks	Subsidies on products	Output value at basic prices
	Tons	Tons	EUR/ton	EUR 1 000 000	EUR 1 000 000	EUR 1 000 000	EUR 1 000 000	EUR 1 000 000	EUR 1 000 000
Cattle	91 188	2 100	1 909	178.1	38.5	0.2	-5.8	198.1	<b>409.1</b>
Pigs	198 110	380	1 205	239.2	16.7	0.6	-2.9	50.9	<b>304.5</b>
Sheep and goats	596	60	1 979	1.3	-	0.2	0.0	2.0	<b>3.5</b>
Poultry	86 955	10	1 235	107.4	-	0.3	0.1	14.9	<b>122.7</b>
Horses	93	0	323	0.0	-	-	-	1.1	<b>1.1</b>
Reindeers	2 550	700	4 150	13.5	-	-	-0.3	-	<b>13.2</b>
<b>Animals, total</b>	<b>379 492</b>	<b>3 250</b>	<b>1 410</b>	<b>539.5</b>	<b>55.2</b>	<b>1.3</b>	<b>-8.9</b>	<b>267.0</b>	<b>854.1</b>

### *Animal products:*

#### *Milk*

Dairy statistics compiled by TIKE are used principally as a data source for milk production.

Data on dairy statistics are gathered from all dairies each month. The statistics show the number of milk suppliers, deliveries of milk, the producer

price, product subsidy, fat and protein content of milk and manufacture of milk products.

Production data for milk that is consumed by the producers and sales from holdings for direct consumption are obtained from TIKE based on Farm surveys conducted in June and December. The price information used is that given in the dairy statistics.

Changes in the fat and protein content of milk are treated as changes in volume. In practical terms, this means that compensation or deductions for variations greater than 4.3% in fat content and 3.3% in protein concentration are carried over to output volumes.

The statistics on milk production can be considered exhaustive and reliable.

### *Eggs and wool*

The figures for physical quantities of eggs received are based on the egg production statistics compiled by TIKE. The information is collected every quarter for each month from all enterprises registered as egg packers in Finland. The information on producer prices is collected monthly from egg packers by TIKE.

The production of eggs for the producer's own consumption is assessed based on Statistics Finland Household Budget Surveys.

Production data for wool are based on sample surveys conducted by TIKE in June and December.

### *Raw furskins and reindeer hides*

Production figures and unit prices for fur pelts are based on statistics compiled by the Finnish Fur Breeders Association (STKL), which is the industry organisation.

Reindeer hides are also included in the output. Data on the amount and price of hides are obtained from the Association of Reindeer Herding Co-operatives (PY).

### *Beekeeping*

Honey production data are based on statistics provided by the Finnish Beekeepers Federation (SML), the organisation for the industry. To calculate the overall honey harvest, estimates are made of mean honey production and the hive count for each area based on observations of hives cultivated and harvest surveys in writing. The estimate is subject to a risk factor, as no accurate information exists on the number or annual increase of hives.

**Table 5: Animal products 2004**

Product	Sales	Producer price	Quality premium	Output at producer prices	Product subsidies	Output at basic prices
Milk						
To dairies (1 000 l)	2 303.5	349.2*	31.1	835.5	253.2	1 088.7
To consumers (1 000 l)	1.0	331.0	-	0.3	0.2	0.5
On-farm final consumption (1 000 l)	17.3	331.0	-	5.7	-	5.7
<b>Milk, total</b>	<b>2 321.8</b>		<b>31.1</b>	<b>841.5</b>	<b>253.4</b>	<b>1 094.9</b>
Eggs						
To egg packers	56.5	740		41.8	-	41.8
For domestic use	1.3	740		1.0	-	1.0

Final consumption of non-holder in private livestock rearing	1.5	740		1.1	-	1.1
<b>Total</b>	59.3	740	-	43.9	-	43.9
Fur pelts (1 000)	3 841	42.36		162.7		162.7
Reindeer hides (1 000)	105.3	700		0.7		0.7
Honey (incl. on-farm consumption)	1 600	4 541		7.3		7.3
Wool	0.08	1 250		0.1		0.1
<b>Total</b>			.. 31.1	1 056.2	253.4	1 309.6

\* Includes adjustment payment, which is the cooperative additional payment made to their suppliers by dairies on the basis of their financial statement

## *Growing of crops:*

### *Cereals*

The quantity of cereal output is reflected in the harvest saved. The cultivated areas giving harvest figures are based on TIKE's integrated administration and control system (IACS) while the yields (per hectare) are based on TIKE sample surveys. Losses after harvest and seed produced and used on the same holding are deducted from the output. Harvest calculations are prepared by TIKE.

Cereal use consists of: 1) deliveries outside the industry, 2) deliveries from one holding to another, 3) intra-unit consumption of cereal as animal feed, 4) cereal as a food source for holdings, and 5) changes in stocks.

Cereal deliveries outside the industry are shown in purchase statistics of cereals that are used in manufacturing. They reflect the total volume of cereal for domestic and foreign grain purchases. The statistics take account of the purchases by end users of cereals (i.e. mills, malthouses, seed companies, feed factories and other companies) from farmers, cereals clearing companies, the intervention store, other companies, and purchases from abroad. Cereals clearing companies are classified as conveyors of cereals from farmers to industry (and are not end users). Cereal deliveries outside the industry = domestic cereal purchases for use in manufacturing + export + intervention store purchases – imports.

TIKE prepares statistics on cereal purchases by domestic manufacturers based on surveys sent to companies each month. Import and export statistics for cereals are based on the National Board of Customs' foreign trade statistics and on statistics for intervention purchases by the Ministry of Agriculture and Forestry's intervention unit. All statistics data described above are published monthly in Monthly Review of Agricultural Statistics.

Sample surveys by TIKE collect data on deliveries of grain between holdings and on the intra-unit consumption of cereals for animal feed and for own final consumption.

The opening stock for statistical year t is the cereal from the previous year being traded by the end of July of year t and the closing stock is that harvested in calendar year t and traded by the end of July of year t+1. The change in inventories is the difference between closing and opening stock. It is presumed that inventories in holdings are empty at the close of each harvest year, i.e. the end of July. In addition, inventories are presumed to be only for the delivery of cereal outside the industry.

Since use and resource data are not (as a rule) in equilibrium, they must be adjusted.

The same producer price, the average for the calendar year, is used for four items of use. When valuing stock changes the average monthly prices applicable from the beginning of January to the end of August are applied. The method is based on "Manual on the economic Accounts for Agriculture and Forestry". Average monthly prices are calculated from weekly prices to be found in the market price monitoring system and weighted as averages. The prices are requested each week from 30 companies and 45 outlets. The average prices for the calendar year are calculated from monthly data. Producer price data are compiled by TIKE.

Output is valued at basic prices by allocating subsidies on products to all items in use, distributing subsidies first between stock and non-stock parts of output and then between other items based on the volumes used. Subsidies on products include only those in the Common Agricultural Policy. The Common Agricultural Policy subsidies are available through the Integrated Administration and Control System.

Because harvested amounts are only calculated based on the cultivated areas of farms applying for subsidies, the actual amount harvested may be greater than given in the statistics but the error is probably marginal.

**Table 6 : Output of cereals in 2004 (in tonnes)**

Item	(1) Harvest	(2) Losses, intra-unit consumption as seeds	(3) Sales outside the industry	(4) Sales to other agricultural units	(5) Intra-unit consumption as feedingstuffs	(6) Own final consumption	(7) Change in stocks	(8) Output = (1) - (2) = (3) + ... + (7)
Wheat	699 300	36 600	528 344	45 600	81 800	2 600	4 356	<b>662 700</b>
Rye	62 400	2 800	54 945	1 300	1 300	600	1 455	<b>59 600</b>
Barley	1 724 700	27 100	718 029	296 600	700 800	1 500	-19 329	<b>1 697 600</b>
Oats	1 046 600	82 300	665 468	161 100	375 000	2 400	-239 668	<b>964 300</b>
Other cereals	3 400	-	3 400	-	-	-	-	<b>3 400</b>
<b>Total</b>	<b>3 536 400</b>	<b>148 800</b>	<b>1 970 186</b>	<b>504 600</b>	<b>1 158 900</b>	<b>7 100</b>	<b>-253 186</b>	<b>3 387 600</b>

**Table 7 : Output of cereals at basic prices in 2004**

Item	Output	Producer price euro/ ton	Output at producer prices	Subsidies on products	Output at basic prices 1 000 000
Wheat	662 700	851	75.7	54.2	129.9
Rye	59 600	872	6.9	9.0	15.9
Barley	1 262 300	730	176.6	138.0	314.6
Oats	902 100	664	84.0	73.0	157.0
Other cereals	3 400		0.6	0.4	1.0
<b>Total</b>	<b>3 387 600</b>		<b>343.8</b>	<b>274.6</b>	<b>618.4</b>

### *Sugar beet*

Physical quantities and prices for sugar beet are produced by the Sugar Beet Research Centre. The data can be considered reliable. Quality premiums for sugar concentrations are converted into amounts as follows: sugar beet production in 2004 came to 1 063 500 tonnes and quality deductions amounted to EUR 0.9 million. When quality is taken into account, without

changing the producer price, the quantity of sugar beet amounts to 1 045 070 tonnes.

### *Oleaginous plants*

Prices and amounts for oleaginous plants, turnip rape and rapeseed are gathered by TIKE. The output amounts are calculated using the same data sources as for cereal plant output. These data sources can be considered reliable.

### *Protein plants*

The prices and amounts are gathered by TIKE. As producer price is used the average price fodder peas and peas for human consumption. The method applied is based on balance sheet information of food commodities. The output amount is calculated using the same data sources as for cereal plant output. These data sources can be considered reliable.

### *Potatoes*

Harvest figures prepared by TIKE, using the same methods and data sources as for cereals, are the starting point for calculating potato output. Data on the amount of potatoes for manufacturing (starch, other) are gathered by the industry's unions. Price related data are gathered by the Agricultural Economics Research Institute.

Data on seed production amounts are based on harvest use statistics. Again, prices are from TIKE.

Output for own-account use by producers is estimated based on Household Budget Surveys prepared by Statistics Finland.

The distribution of potato sales by calendar month is estimated based on the collection data on prices (= tonnes of potatoes included in the sample). The average price at the end of the calendar year is used for inventory valuation. The method is based on the manual mentioned above.

### *Market garden plants and products growing wild*

Data applying to market garden plant output – berries, fruit and vegetables – are to be found in TIKE's Horticultural Enterprise Register, which was established in 1984. It contains all enterprises producing market garden plants for sale on a regular basis, roughly 10 000 in number. Data for the Horticultural Enterprise Register are requested annually using a postal survey at the end of the year.

Output for own-account use by producers is estimated based on Household Budget Surveys prepared by Statistics Finland.

### *Fresh vegetables*

Data on production volumes are to be found in the Horticultural Enterprise Register. Data on prices are gathered by Kasvistieto. The change in stocks is calculated according to the method applied for potatoes.

Data on prices and physical quantities of cultivated mushrooms are obtained from the sector's trade organisation. Output consists of the production of *Agaricus* mushrooms, oyster fungus and shitake mushrooms.

The gathering of wild berries and mushrooms is based on the public right to do so. Mushroom picking data are based on the amount of mushrooms being traded and on own-account use by producers, collected by Food Facts Oy. The amount for own-account use by households is estimated based on Household Budget Surveys prepared by Statistics Finland. The amounts for sale at shops are derived from data supplied by central retail organisations and enterprises specialised in berry and mushroom trade.

### *Fresh berries*

Calculations for fresh berries are made based on the production volumes in the market garden business register and price data collected by Kasvistieto. The calculations for wild berries are prepared in the same way as for wild mushrooms.

### *Fodder plants*

Production amounts for fodder plants are based on TIKE's harvest calculations and on price data collected by the Union of Rural Advisory Centres.

### *Ornamental plants and flowers, nursery plants*

Estimates of output value of ornamental plants and flowers are obtained from the Finnish Glass House Growers' Association, the leading organisation in the industry. It represents nearly half the enterprises in the sector, including the biggest. Estimates on the output of seedlings are obtained from Agrifood Research Finland/Economic Research.

**Table 8 : Other crop output at basic prices in 2004**

Item	Output, tonnes	Producer price	Value	Product subsidies	Output at basic price, mil.
Industrial crops			71.6	21.8	<b>93.4</b>
Sugar beet	1 045 070	50.81	53.1	-	<b>53.1</b>
Oil seeds and oleaginous fruits	75 900	229	17.4	19.7	<b>37.1</b>
Protein crops	5 600	167.12	0.9	1.6	<b>2.5</b>
Fibre plants			0.2	0.5	<b>0.7</b>
Potatoes	641 000	801	99.3	5.0	<b>104.3</b>
- for industrial use	304 600	58.4	17.8	5.0	22.8
- for producer's final consumption	103 700	225.6	23.4	-	23.4
- other	190 100	249.7	58.1*	-	58.1
Vegetables	-	-	223.6		<b>223.6</b>
- fresh vegetables**	-	-	209.7	-	209.7
- cultivated mushrooms	2 020	3 712	7.5	-	7.5
- wild mushrooms	2 600	2 460	6.4	-	6.4
Berries			101.4		<b>101.4</b>
- fresh			82.9		82.9
- wild			18.5		18.5
Fruits			5.0		
Decorative plants and seedlings	-	-	121.2	-	<b>121.2</b>
Fodder plants			508.6	31.7	<b>540.3</b>
Other			3.1	3.1	<b>6.2</b>
<b>Total</b>			<b>1 133.8</b>	<b>61.6</b>	<b>1 195.4</b>

\*Incl. change in inventories.      \*\*Incl. products      not measured in tonnes

*Agricultural services:*

Agricultural services include agricultural and animal husbandry service activities, except veterinary activities. Data on service output are obtained from the Structural Business Statistics.

Some of the activities to be treated as inseparable activities comprise services supplied by local agricultural kind-of-activity units for each other. These services are not assessed separately from other activities. Differentiation is feasible, for example, by availing of pricing information contained in agricultural enterprise and income statistics, as when preparing the Economic Accounts for Agriculture.

*Inseparable non-agricultural activities:**Production of home-made butter and cheese*

Amounts of home-made butter and cheese are investigated through sample surveys conducted by TIKE. The prices used are as published by the Central Dairy Co-operative.

The share of home-made butter and cheese production to the overall output of animal husbandry amounts to roughly one to one thousand.

*Other*

The agricultural enterprise and income statistics are used as a data source. The section "Earnings from extra income in agriculture" describes earnings to be found in leases of agricultural production equipment, farmhouse tourism, processing of agricultural products, etc. Cost data applying to these items cannot be statistically separated from agricultural expenditure. Forestry expenditure, on the other hand, can be separated based on statistical sources. The value of home-made butter and cheese output is deducted from this item.

**Table 9 : Output of agricultural industry 2004, in mil.**

	Output at producer prices	Subsidies on products	Output at basic price
Animals	587.1	267.0	<b>854.1</b>
Animal products	1 056.2	253.4	<b>1 309.6</b>
Animal output	1 643.3	520.4	<b>2 163.7</b>
Growing of crops, market gardening, horticulture	1 477.6	336.2	<b>1 813.8</b>
Agricultural goods output	3 120.9	856.6	<b>3 977.5</b>
Agricultural services output	75.0	-	<b>75.0</b>
Agricultural output	3 195.9	856.6	<b>4 052.5</b>
Non-agricultural inseparable activities	235.0	-	<b>235.0</b>
Output of the Agricultural industry	3 430.9	856.6	<b>4 287.5</b>

*3.7.1.3 Intermediate consumption*

Intermediate consumption is valued at purchasers' prices. It includes taxes levied on the use of commodities, such as fertiliser taxes. Statistical data applying to intermediate consumption are obtained mainly from four sources: nearly half the data are based on declarations of inputs by

manufacturers or vendors, or on manufacturing or sales data submitted by them. A similar amount of data derives from the agricultural enterprise and income statistics and the remainder comes from the Structural Business Statistics. The national Farm Accountancy Data Network was used to divide aggregate costs of individual products in the Structural Business Statistics.

The Structural Business Statistics and agricultural enterprise and income statistics comprise two mutually exclusive sets of statistics. The units of one set of statistics are taxed under the act on business income tax and those of the other under the act on agricultural income tax. Because data on inventories of production inputs are not available, intermediate consumption only reflects acquisition costs to some extent and not actual use. The classification given below is based on that followed in agricultural economy accounts. The same classification is used to collect data for the purchase price index of the means of agricultural production.

### *Seeds and planting stock*

Data on seed use are gathered by the Agricultural Economics Research Institute (MTT). The source is data on volumes from the Plant Production Inspection Centre (KTTK) and pricing data available from seed companies. Data relevant to the use of seeds and seedlings by market garden enterprises are based on the Farm Accountancy Data Network.

### *Energy; lubricants*

The most extensive private data source for statistics on intermediate consumption in agriculture consists of the agricultural enterprise and income statistics mentioned above. Many items can be investigated through this source, namely veterinary medicines, fuel and lubricants, electric power consumption, firewood and commercial timber, acquisition of low cost tools and equipment, leasing production tools, costs arising from the service and repair of machinery and equipment, maintenance and repair of buildings, and costs for the use of other goods and services.

The statistical data on individual holdings are based on the tax returns drawn from sample statistics of agricultural self-employed persons. The cost data are aggregate costs from which other costs are separated, such as costs arising from household use, forestry and other business activities, with agriculture costs (and the cost of activities inseparable from it) being left as the remainder.

Energy costs applying to market garden enterprises obtained from the Farm Accountancy Data Network are added to the energy cost data obtained in agricultural enterprise and income statistics.

### *Fertilisers and soil improvers*

The value of fertiliser use is based on data to be found in agricultural enterprise and income statistics and the Farm Accountancy Data Network. The data sources can be considered quite reliable. Data on the sale of agricultural fertilisers and other land improvement materials are used for control purposes.

*Plant protection products and pesticides*

Data applying to the use of plant protection, herbicides and pesticides are gathered by the Agricultural Economics Research Institute. The data source is information from the Plant Production Inspection Centre.

*Veterinary expenses*

The data are based on agricultural enterprise and income statistics. The output value of agricultural services related to animal husbandry is deducted from the item "Other animal husbandry expenditure" and the remainder is regarded as veterinary medicine costs.

*Animal feedingstuffs*

The cost of animal feed derive from standard feed mixes, the use of domestic and foreign feeds, intra-industry consumption, and intra-unit consumption, both of which are included in output. Data applying to the use of feed mixes are gathered from feed plants by the State Institute of Agricultural Chemistry and prices from the Agricultural Economics Research Institute. There are no statistics available on changes in inventories, nor on actual use. According to a survey, 40% of self produced and used feed is used in the calendar year, and the rest in the following year. The consumption of this item and the change in the value of inventories are calculated on this basis.

The amounts and prices of feeds for fur animals are available from the Finnish Fur Breeders Association.

*Maintenance of materials and buildings*

The agricultural enterprise and income statistics are used as a data source from which cost items are obtained.

*Agricultural services*

The cost item corresponds to the value of agricultural services output.

*Other goods and services*

Other goods and services include cost items that do not belong to the foregoing classes. In fact, some of these items should be included, but separation is not feasible based on the available data.

The agricultural enterprise and income statistics and the Structural Business Statistics are used as data sources. In addition, the costs for reindeer husbandry and honey production are valued separately. "Other goods and services" include the acquisition of low-cost tools and equipment, rental costs, insurance service charges, postal and telecommunications charges, membership fees, etc.

The costs of reindeer husbandry are based on data gathered by the Association of Reindeer Herding Co-operatives.

The costs included in honey production are based on costs per beehive calculated by the Finnish Beekeepers Federation.

**Table 10: Intermediate consumption 2004, mil.**

<b>Seeds and planting stock</b>	<b>81.1</b>
<b>Energy; lubricants</b>	<b>257.8</b>
Fuel and lubricants	111.9
Electricity	138.9
Firewood and commercial timber	7.0
<b>Fertilisers and soil improvers</b>	<b>218.9</b>
<b>Plant protection products and pesticides</b>	<b>66.3</b>
<b>Veterinary expenses</b>	<b>96.6</b>
<b>Animal feedingstuffs</b>	<b>1 109.2</b>
<b>Maintenance of material</b>	<b>187.1</b>
<b>Maintenance of buildings</b>	<b>79.3</b>
<b>Agricultural services</b>	<b>122.0</b>
<b>Other goods and services</b>	<b>556.7</b>
<b>FISIM</b>	<b>52.0</b>
<b>Intermediate consumption. total</b>	<b>2 827.0</b>
* Also includes services produced to one another	

#### 3.7.1.4 Value added

The value added at basic prices is calculated as the difference between the output at basic prices and intermediate consumption at purchasers' prices as in other market production industries.

#### 3.7.2 Forestry, logging and related service activities (02)

The "Forestry, logging and related services activities" industry (TOL2002 02) consists of four accounting subindustries. The growing of forests (TOL2002 02011) subindustry covers forest improvement work and reforestation, afforestation of fields, the net growth of the forests and the income from selling raw wood. The logging subindustry is felling and short distance haulage of trees (TOL2002 02013). Other forestry (TOL2002 02019) includes other forestry products and environmental protection measures. Forestry and logging related services (TOL2002 02020) includes forestry planning and other general promotion of forestry, the activity of forestry societies and boards, and training for forest owners.

All establishments of the forest industry and related services are classified as market producers. In the growing of forests industry, agricultural and forest holdings of municipalities and joint municipal authorities are part of general government, and the forests belonging to the Evangelical Lutheran Church are non-profit institutions. Other establishments come under households or under enterprises in the sector classification.

Annual timber cutting in Finland's forest industry amounts to roughly 2-3% of the stock. Inventories of the entire growing stock are made at approximately five-year intervals. Tree growth in northern forests takes longer, the length of time for a pine to reach cutting maturity being 90 years. Reliable data on the volume and price of cut timber are made available monthly.

In Finland's national accounts the practice of the Economic Accounts for Agriculture and Forestry is followed. The output of forestry and logging and related service activities is calculated in terms of the value of the timber felling, activities related to silviculture and changes in inventories arising from timber growth. The proportion of felled trees to overall growth has

been about 3:4 during recent years in cubic metres. In euros the proportion is however different due to the higher value of fellings per cubic metre compared with that of forest growth.

Over half of Finland's forests are in private household ownership. Farming and forestry belong together as, in effect, nearly every holding is partly forested. An unincorporated state enterprise, the National Board of Forestry (Metsähallitus), is a key forest owner, especially in Northern Finland and Lapland. Companies engaged in the forest industry own less than 10% of the country's forested land.

In Finland, extensive data exist on the volume and species of wood sold by all forest owner groups, and of the prices paid to private owners. These data form the basis for calculating the forestry industry in the national accounts.

Growing stock to be sold is traded either in the form of timber felling rights, or so-called sale on the stump, or by contract with the vendor to deliver the wood ready-cut to the roadside. Additionally, large institutional units owning forests, such as the National Board of Forestry and joint owners of forests, deliver the wood they sell to mills.

Sale on the stump is by far the most popular form of sale. About 80% of all timber felling is sold in this way. In this case, the vendor, for example, the farmer or other household member contacts the buyer's representative and, if the price is mutually agreeable, makes a deal. The exact value of the item sold is only determined after the agreed parcel has been felled and the volume of wood measured. The buyers are specialised purchasing organisations belonging to forest industry companies. They also arrange for the cutting and transport of the wood. Purchasing is very concentrated as there are only a few purchasing organisations in the country. In addition, certain sawmills and other consumers of wood may act as buyers. The basic price of wood in this form of trade is the price on the stump.

Another means of selling wood is by sale for later delivery to the purchaser. In this case, the owner arranges the felling and short distance haulage of the wood. As the vendor is responsible for felling and haulage costs, prices for such wood will be higher than if it were sold on the stump. The basic price of wood in this form of trade is the price to the side of the road.

A third means is for the vendor to deliver wood from the stump directly to the mill. The owner arranges the cutting of the wood and short and long distance hauling, and obtains a higher basic price. The basic price of wood in this form of trade is the price delivered to the consumer.

The Finnish Forest Research Institute gathers data about the volume of wood cut, and the stump and purchase prices. There are no independent wholesalers of raw wood as such in Finland. Consequently, any price data made available are not just the market prices of cut roundwood ready for transport, but a measure of the timber's value before cutting and other processes, etc. There are three basic prices depending on how the wood is delivered.

### 3.7.2.1 Main data sources

#### *Growing of forests*

The Finnish Forest Research Institute (METLA)

- Forest statistical bulletin "Commercial cutting for each forestry centre" (trees cut)
- Forest statistics bulletin: "Accrual of trees felled and tree depreciation"
- Forest statistical bulletin "Market prices for raw wood from private forests in each forestry centre"
- Forest statistical bulletin: "Forestry and major improvements"
- Yearbook of forest statistics
- Special report: Extra-market felling of trees
- Special report: Prices of standing timber in the Åland Islands
- Special report: Total change in standing timber by species

Statistics Finland

- Labour Force Survey
- Statistics of municipalities and joint municipal authorities
- Structural business statistics survey data
- Business Register

Forestry Development Centre Tapio

- Yearly statistics, value of seed production

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Evangelical Lutheran Church of Finland

- Profit and loss statement and balance sheet

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#### *Logging*

National Board of Forestry

- Annual report

Metsäteho Oy

- Average logging costs

Statistics Finland

- Cost index of forest machinery (MEKKI)
- Labour Force Survey
- Structural business statistics survey data
- Business Register
- Final central government accounts and budget estimates

#### *Other forestry*

National Board of Forestry (Metsähallitus)

- Annual report

Statistics Finland

- Labour Force Survey
- Structural business statistics survey data
- Business Register

### *Activities serving the forestry industry*

Forestry Development Centre Tapio

- Tapio annual statistics
- Annual report

Statistics Finland

- Labour Force Survey
- Structural business statistics survey data
- Business Register

### *3.7.2.2 Calculation method*

#### *Growing of forests*

##### **Output**

The production account of the growing of forests industry (0211) includes the income on the sale of roundwood, the net growth of forests, forest improvement work and reforestation, and afforestation of fields. The output for the industry is obtained by summing up the total of the turnover of relevant enterprises in the Business Register, the proceeds from selling timber by households from the data gathered by tax authorities, and the value of the net growth of forests. The growth of forests is estimated by the Finnish Forest Research Institute (METLA) by timber assortment, owner group and region based on the data gathered in the National Forest Inventory. The net growth of forests is calculated by deducting the annual fellings from the annual growth of forests. In order to estimate **the value of net growth, use is made of** the annual arithmetic mean for stumpage prices calculated by region and timber assortment.

The output of forestry for local government is obtained from the statistics of municipalities and joint municipal authorities, and for the Evangelical Lutheran Church of Finland from its profit and loss statement (the basic price being either the price for the stump, the price delivered to the roadside, or the price delivered to the papermill). The establishments in the Business Register perform forest improvement services and grow seedlings in addition to selling timber. The entire output is classified as market output.

The value of Christmas trees is estimated by multiplying the assessed average price by the number of trees. Regarding the production and sale of Christmas trees, all other items, such as intermediate consumption, consumption of fixed capital, and wages and salaries, are considered as being included in logging. Prices and volume data of Christmas trees are estimated separately with the help of expert estimates from the Christmas Tree Association and the number of households in Statistics Finland's income distribution statistics. Expert estimates are based on random local price surveys and information on the volume and price of Christmas trees cultivated and sold.

Data regarding land and other own-account production of major improvements of that nature (regeneration area preparation, artificial regeneration, seedling care, thinning of thicket, pruning and forest fertilisation) are to be found in the Forest Research Institute's (METLA)

yearbook of forest statistics, similarly as the value of fellings for own final use.

### **Intermediate consumption**

The production account items for the intermediate consumption of roundwood vendors are intermediate consumption of acquisition work (METLA estimate), forest management fees (Tapio annual statistics), maintenance of forest roads (METLA forest management and major improvement statistics) and other purchases of forest services (Tapio annual statistics).

The intermediate consumption of forest improvement activities and seedling production is obtained by extrapolating the intermediate consumption share of output from Statistics Finland's structural business statistics.

## *Logging*

### **Output**

Logging services and short distance hauling of raw wood belong to the logging production account.

The output of logging services is the total of the activities turnover of logging enterprises in the Business Register.

### **Intermediate consumption**

The intermediate consumption of logging services is to be found in Statistics Finland's structural business statistics survey data.

## *Other forestry*

### **Output**

Most of the output of Other forestry derives from the environmental protection activities of the National Board of Forestry (Metsähallitus). An unincorporated state enterprise, it administers national parks and environmental protection areas, for which it gets general government funds. Its management duties are adjusted jointly by Metsähallitus and the ministries responsible for its activities, and the funds it obtains meet the entire cost of activities. All the rest of Other forestry activity belongs under market output. The sources of output are the Metsähallitus profit and loss statement, and supplementary questions in Parliament regarding the use of the Metsähallitus funds.

The output of other establishments is obtained by means of structural business statistics survey data and the Business Register.

The output of the Other forestry industry includes the value of reindeer moss gathering (Yearbook of forest statistics), the value of the output of other forestry enterprises and that of the environmental protection activities performed by Metsähallitus.

### **Intermediate consumption**

The source for the intermediate consumption of Metsähallitus is the profit and loss statement of Metsähallitus and supplementary questions in Parliament regarding the use of the Metsähallitus funds.

The intermediate consumption of other establishments is obtained by means of structural business statistics survey data and the Business Register.

### Activities serving forestry

#### Output

The output of other forestry, intermediate consumption items and wages and salaries are to be found in the profit and loss account data of forestry societies, forestry centres and the Forest Development Centre Tapio. The data on forest management associations and forestry centres are from Tapio's profit and loss account and annual statistics.

Data on the remaining establishments are obtained by means of structural business statistics survey data and the Business Register.

#### Intermediate consumption

The intermediate consumption of forestry societies, forestry centres and the Forest Development Centre Tapio includes the operating costs of the bodies mentioned above, excluding non-wage, depreciation and financing costs. The data on forestry societies and forestry centres are from derived from Tapio's annual statistics, and the profit and loss statement from its annual report.

Data on the remaining establishments are obtained by means of structural business statistics survey data and the Business Register.

**Table 11. Production account and generation-of-income account in 2004**

	SECTORS	CORPORATIONS	HOUSEHOLDS	NON-PROFIT INSTITUTIONS	LOCAL GOVERNMENT
	TOTAL	SECTOR	SECTOR	SECTOR	SECTOR
<b>Growing of forests</b>					
<i>Output at basic prices</i>	1 977	458	1 444	15	60
Market output	1 846	440	1 336	15	55
Production for own final use	131	18	108		5
<i>Intermediate consumption at purchasers' prices</i>	369	241	104	3	21
<i>Value added gross, at basic prices</i>	1 608	217	1 340	12	39
<i>Consumption of fixed capital</i>	279	56	218	2	3
<i>Value added net, at basic prices</i>	1 329	161	1 122	10	36
<i>Wages and salaries</i>	78	66	1	2	9
<i>Employers' social contributions</i>	18	16			2
<i>Operating surplus/Miscellaneous income, net</i>	1 237	79	1 125	8	25

#### Logging

<i>Output at basic prices</i>	927	796	131
Market output	927	796	131
Production for own final use			
<i>Intermediate consumption at purchasers' prices</i>	244	209	35
<i>Value added gross, at basic prices</i>	683	587	96
<i>Consumption of fixed capital</i>	104	79	25
<i>Value added net, at basic prices</i>	579	508	71
<i>Wages and salaries</i>	112	107	5
<i>Employers' social contributions</i>	27	26	1
<i>Operating surplus/Miscellaneous income, net</i>	440	375	65

#### **Other forestry**

<i>Output at basic prices</i>	32	31	1
Market output	32	31	1
Production for own final use			
<i>Intermediate consumption at purchasers' prices</i>	1	1	
<i>Value added gross, at basic prices</i>	31	30	1
<i>Consumption of fixed capital</i>			
<i>Value added net, at basic prices</i>	31	30	1
<i>Wages and salaries</i>			
<i>Employers' social contributions</i>			
<i>Operating surplus/Miscellaneous income, net</i>	31	30	1

#### **Activities serving forestry**

<i>Output at basic prices</i>	280	280	
Market output	280	280	
Production for own final use			
<i>Intermediate consumption at purchasers' prices</i>	149	149	
<i>Value added gross, at basic prices</i>	131	131	
<i>Consumption of fixed capital</i>	9	9	
<i>Value added net, at basic prices</i>	122	122	

<i>Wages and salaries</i>	107	107
<i>Employers' social contributions</i>	26	26
<i>Operating surplus/Miscellaneous income, net</i>	-10	-10

#### **Forestry and related services**

<i>Output at basic prices</i>	3 216	1 565	1 576	15	60
Market output	3 085	1 547	1 468	15	55
Production for own final use	131	18	108		5
<i>Intermediate consumption at purchasers' prices</i>	763	600	139	3	21
<i>Value added gross, at basic prices</i>	2 453	965	1 437	12	39
<i>Consumption of fixed capital</i>	392	144	243	2	3
<i>Value added net, at basic prices</i>	2061	821	1194	10	36
<i>Wages and salaries</i>	297	280	6	2	9
<i>Employers' social contributions</i>	71	68	1		2
<i>Operating surplus/Miscellaneous income, net</i>	1 698	474	1 191	8	25

#### **Work in progress from forest growth**

The calculation of forestry output is based on yearly changes of the growing stock of Finnish forests. All the data: the annual increment of growing stock of forests, the prices and amount of felled timber and other changes of raw wood are obtained from the Forest Research Institute (FRI) of Finland. The information of the growing stock of trees is based on National Forests Investigation work by FRI of Finland.

The net growth (net increment) in cubic metres of standing forest, (variation in quantity of timber cut) is the difference between gross growth (gross increment) and total drain. The net growth in forestry increases or reduces total supply in the form of an output value and at the same time it gives total use as a change in inventories (see 5.13.2 on inventories).

#### **National Forest Investigation (NFI 10)**

Based on the field measurements made in 2004-2007, the growing stock of Finnish forests is 2 201 million cubic metres and the annual increment of growing stock 99.2 million cubic metres. Half of the stock consists of Scots pine, less than one third of Norway spruce, 12% of common white birch, 4% of silver birch, and the remainder of other deciduous and coniferous tree species. The annual drain (fellings and natural losses) over the last five years has been 70% of the average increment during the same period.

#### **Field Measurements**

The national forest inventories are made regularly in 5-10 years cycles. The latest forest statistics are based on the 10th NFI whose field measurements were started in summer 2004.

The main thematic groups of observed variables in the forest inventory are divided to different stand and tree levels. Stand data consists e.g. data on owner group, site description (land use, main soil type...), description of growing stock (e.g. development class, age, mean height, damages), accomplished and proposed cuttings, silvicultural measures. Tree data is divided to tally trees, sample trees and dead tree data.

### Summary of the forest resources in two most recent NFIs:

	NFI10 (2004-2007)	NFI9 (1996-2003)	Change
Land area	30.415 mill. ha	30.447 mill. ha	0 %
- forestry land	26.290 mill. ha	26.317 mill. ha	0 %
- forest and scrub land	22.882 mill. ha	23.008 mill. ha	-0.5 %
Volume of growing stock	2 201 mill. m3	2 091 mill. m3	+5 %
- Scots pine	1 096 mill. m3	1 000 mill. m3	+10 %
- Norway spruce	670 mill. m3	695 mill. m3	-4 %
- birch	363 mill. m3	325 mill. m3	+12 %
- other deciduous	72 mill. m3	72 mill. m3	+1 %
Annual increment	99.2 mill. m3	86.7 mill. m3	+14 %
- Scots pine	47.4 mill. m3	39.49 mill. m3	+20 %
- Norway spruce	29.4 mill. m3	27.3 mill. m3	+8 %
- birch	18.3 mill. m3	15.5 mill. m3	+18 %
- other deciduous	4.1 mill. m3	4.4 mill. m3	-7 %
- average per hectare	4.3 m3/ha	3.8 m3/ha	

The data in the table includes all forests and woodland, also areas under protection and out of economic use. For Statistics Finland information of felling, prices and volume of raw wood are obtained from the Forest Research Institute. Also data for the inventory change is obtained from FRI. For the calculations there are 20 districts with information of stock of wood, felling, and prices. All data is for six raw wood type.

Inventory change, m3 and mill. €

Year	m3	mill. €
1995	5,57	-116,92
1996	10,59	11,45
1997	6,86	-71,87
1998	6,37	-72,72
1999	6,19	-79,29
2000	7,21	-45,57
2001	10,69	133,26
2002	10,49	118,81
2003	10,33	88,45
2004	11,04	95,29
2005	13,94	194,97

2006	16,65	271,85
2007	23,99	299,26

### Data for year 2000, net growth, prices and values

District	net growth, m3			logs (saw timber), m3			pulp wood, m3			Total
	Pine	Spruce	Birch	Pine	Spruce	Birch	Pine	Spruce	Birch	
Åland	0	62 929	23 007	9 900	-21 266	5 636	55 165			135 371
Uusimaa	1	105 112	-281 124	40 572	205 256	-138 055	277 354			209 115
Varsinais-Suomi	2	-238 401	-299 527	26 313	316 979	-61 156	216 577			-39 215
Itä-Uusimaa	3	83 022	-87 434	7 471	72 107	491	21 494			97 149
Satakunta	4	-32 779	-107 355	-8 858	66 426	-259 012	138 651			-202 927
Kanta-Häme	5	10 271	-306 711	-45 667	48 972	1 706	24 612			-266 819
Pirkanmaa	6	96 730	-88 276	134 496	160 866	-318 910	308 086			292 992
Päijät-Häme	7	-58 707	119 622	-43 290	26 402	-19 133	58 809			83 703
Kymenlaakso	8	146 515	-162 212	27 329	188 797	-192 157	116 541			124 813
Etelä-Karjala	9	-284 907	-172 033	-108 121	182 807	56 743	156 822			-168 689
Etelä-Savo	10	-177 737	84 863	-172 207	30 927	14 655	238 427			18 927
Pohjois-Savo	11	107 324	-570 230	45 813	715 850	-157 619	457 301			598 439
Pohjois-Karjala	12	-593 370	-468 486	-88 856	1 215 128	113 661	497 455			675 533
Keski-Suomi	13	192 873	-327 458	-9 742	691 989	-606 437	513 505			454 730
Etelä-Pohjanmaa	14	53 264	-208 854	10 306	1 056 440	-59 867	146 138			997 426
Pohjanmaa	15	-15 973	-171 831	-22 014	301 341	-161 161	241 226			171 588
Keski-Pohjanmaa	16	10 911	-54 266	2 669	379 340	32 448	47 499			418 602
Pohjois-Pohjanmaa	17	-148 015	-370 175	-25 864	1 582 402	-184 710	401 689			1 255 325
Kainuu	18	-58 358	-188 539	8 189	1 209 669	-180 299	460 884			1 251 545
Lappi	19	244 295	-235 529	-20 540	1 786 544	-531 258	-140 873			1 102 638
Whole country	20	-495 002	-3 872 548	-232 102	10 216 973	-2 644 436	4 237 360			7 210 246

Price per m3, euro	log			pulp wood			Average
	Pine	Spruce	Birch	Pine	Spruce	Birch	
Åland	0	30,2	28,1	25,6	12,7	14,3	10,5
Uusimaa	1	46,5	44,7	41,8	13,7	23,1	13,2
Varsinais-Suomi	2	47,5	44,6	39,2	15,5	24,8	13,9
Itä-Uusimaa	3	44,9	44,2	40,5	13,6	22,4	13,0
Satakunta	4	48,0	44,7	38,1	15,7	24,8	14,2
Kanta-Häme	5	48,3	45,0	42,5	14,2	24,0	13,8
Pirkanmaa	6	48,7	44,7	42,0	14,7	24,3	14,1
Päijät-Häme	7	49,4	45,4	47,0	14,2	23,1	14,5
Kymenlaakso	8	49,9	45,4	46,8	14,4	22,4	14,5
Etelä-Karjala	9	49,9	45,4	46,8	14,4	22,4	14,5
Etelä-Savo	10	50,2	44,9	48,4	15,1	22,7	15,4
Pohjois-Savo	11	47,6	44,7	46,0	14,3	22,8	14,6
Pohjois-Karjala	12	46,4	42,4	44,5	14,3	21,7	14,6
Keski-Suomi	13	48,8	44,8	46,0	14,4	23,0	14,8
Etelä-Pohjanmaa	14	47,1	42,1	39,1	15,4	22,3	15,1
Pohjanmaa	15	43,5	39,7	40,3	15,4	21,5	14,6
Keski-Pohjanmaa	16	44,9	40,2	40,9	15,6	20,9	14,6
Pohjois-Pohjanmaa	17	44,0	36,3	38,5	15,7	18,6	15,1
Kainuu	18	44,0	37,2	38,4	14,5	21,7	13,8
Lappi	19	40,9	31,5	33,1	14,7	17,4	14,3
Average	20	47,4	43,9	45,6	14,9	22,7	14,7

### Value of net growth, mill. euro

Åland	0	1,90	0,65	0,25	-0,27	0,08	0,58	3,19
Uusimaa	1	4,88	-12,56	1,70	2,80	-3,18	3,67	-2,69
Varsinais-Suomi	2	-11,33	-13,37	1,03	4,92	-1,51	3,02	-17,25
Itä-Uusimaa	3	3,73	-3,86	0,30	0,98	0,01	0,28	1,44
Satakunta	4	-1,57	-4,80	-0,34	1,04	-6,41	1,97	-10,10
Kanta-Häme	5	0,50	-13,79	-1,94	0,70	0,04	0,34	-14,16
Pirkanmaa	6	4,71	-3,95	5,64	2,36	-7,76	4,33	5,34
Päijät-Häme	7	-2,90	5,43	-2,03	0,37	-0,44	0,86	1,28
Kymenlaakso	8	7,30	-7,36	1,28	2,72	-4,31	1,69	1,32
Etelä-Karjala	9	-14,21	-7,80	-5,06	2,63	1,27	2,28	-20,89
Etelä-Savo	10	-8,93	3,81	-8,33	0,47	0,33	3,66	-8,99
Pohjois-Savo	11	5,11	-25,50	2,11	10,22	-3,60	6,66	-5,00
Pohjois-Karjala	12	-27,53	-19,86	-3,95	17,42	2,47	7,26	-24,20

Keski-Suomi	13	9,41	-14,66	-0,45	9,98	-13,97	7,62	-2,08
Etelä-Pohjanmaa	14	2,51	-8,79	0,40	16,22	-1,34	2,21	11,22
Pohjanmaa	15	-0,70	-6,82	-0,89	4,64	-3,46	3,51	-3,70
Keski-Pohjanmaa	16	0,49	-2,18	0,11	5,91	0,68	0,69	5,70
Pohjois-Pohjanmaa	17	-6,51	-13,44	-1,00	24,83	-3,44	6,08	6,53
Kainuu	18	-2,57	-7,01	0,31	17,50	-3,91	6,36	10,68
Lappi	19	10,00	-7,42	-0,68	26,17	-9,26	-2,01	16,79
Whole country	20	-25,71	-163,29	-11,53	151,62	-57,71	61,05	-45,57

The three tables include the information of net growth of forests cubic metres, prices and values. All the calculations are by 20 districts of the country. Prices are so called stumpage prices, that is the amount of money the forest owner get of the raw wood per m<sup>3</sup>. It does not include any felling or transportation costs. The values are in million of euros by districts. Though the total amount of net stock in m<sup>3</sup> is positive, the total value of net growth is negative. This comes from the fact that prices of logs (sawmill timber) and pulp wood are different and changes in net stock varies between wood species and districts from minus to plus.

### 3.8 Fishing (B)

	NACE B	Output	IC	GVA	
1	Basis for NA figures	<b>119</b>	<b>52</b>	<b>67</b>	} Dat valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>119</b>	<b>52</b>	<b>67</b>	
4	Reallocations for national accounting		<b>2</b>	<b>-2</b>	} Conceptual adjustment
	Reallocations for alignment with ESA 95		<b>2</b>	<b>-2</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP		<b>2</b>	<b>-2</b>	
5	National-accounting result (rounded)	<b>119</b>	<b>54</b>	<b>65</b>	} Balancing
6	Macroeconomic reconciliation adjustment				
7	<b>Final NA estimate</b>	<b>119</b>	<b>54</b>	<b>65</b>	

Professional coastal and inland water fishing, fish farming and part-time and spare-time fishing are considered to belong to the fishing industry (TOL2002 05010 and 05020).

Professional and part-time fishing and fish farming are market output of market producers.

Spare-time fishing is considered to belong in its entirety to household sector own-account producers. Its output is mainly own-account output. Part of the catch is classified as market output since a large part of the catch of spare-time crayfishers, for example, is sold.

### 3.8.1 Main data sources

- Finnish Game and Fisheries Research Institute
  - Professional fishing in ocean and coastal waters
  - Professional fishing in inland waters
  - Part-time angling
  - Fishery fees
  - Fish farming
- Statistics Finland
  - Structural business statistics
  - Business Register
  - Labour Force Survey

### 3.8.2 Calculation method

#### Output

The output of the fishing industry is obtained on the basis of the structural statistics survey data of enterprises. The entire value of turnover is classified as market production. Market growth is supplemented somewhat up to the value of the hidden economy.

The Finnish Game and Fisheries Research Institute's publications "Professional fishing in ocean and coastal waters" and "Professional fishing in inland waters" provides comparative data. The data are based on reports of catches submitted by fishing professionals. Requests for reports are sent to all engaged in fishing professionally. The comparative data is at the same level as the turnover data given in structural business statistics.

The output of fish farming is obtained on the basis of turnover data found in the structural statistics survey data of enterprises. The entire output is classified as market output.

The Finnish Game and Fisheries Research Institute publication "Fish Farming" is used for comparative data. In determining value, the institute uses price data obtained from fish farming plants and volume counts based on statistics for fish fry deliveries. The output includes the output of edible fish and fish hatcheries.

Comparative data on fish fry farming is priced according to the average unit price of rainbow trout fry. The imputed price is derived by dividing the rainbow trout fry production by the number of fish fry. The comparative statistics are at a lower level, which is chiefly due to the incompleteness of the fish fry farming statistics.

The value of part-time fishing, or own-account output, is to be found in the Institute's publication "Part-time fishing". The catch volumes are based on surveys sent out every second year by the Institute. In the intermediate years, the volumes for the year before are used. The statistics for part-time fishing are estimated on the basis of average prices earned by fishing professionals. Price information is published by the Institute in "Fishing prices". The data are gathered from purchasing information supplied by 20 coastal and five inland fish wholesalers.

### Intermediate consumption

Intermediate consumption is intermediate consumption of fishing professionals and fish farming obtained on the basis of turnover stated in structural business statistics survey data and the Business Register.

The share of intermediate consumption in relation to output is to be found in the structural business statistics. Intermediate consumption is found by multiplying this share by the imputed professional fishing output.

### 3.9 Mining and quarrying (C)

	NACE C	Output	IC	GVA	
1	Basis for NA figures	<b>1108</b>	<b>751</b>	<b>357</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>1108</b>	<b>751</b>	<b>357</b>	
4	Reallocations for national accounting	<b>3</b>	<b>-6</b>	<b>9</b>	} Conceptual adjustment
	Reallocations for alignment with ESA 95	<b>3</b>	<b>-6</b>	<b>9</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>3</b>	<b>-6</b>	<b>9</b>	
5	National-accounting result (rounded)	<b>1111</b>	<b>745</b>	<b>366</b>	} Balancing
6	Macroeconomic reconciliation adjustment	<b>7</b>	<b>-3</b>	<b>10</b>	
7	<b>Final NA estimate</b>	<b>1118</b>	<b>742</b>	<b>376</b>	

Mining and quarrying include the extraction, processing and exploitation of minerals occurring in the nature (also contracting).

Calculation of this industry is explained in Section 3.10. Manufacturing, where calculation of industries C, D and E is presented.

### 3.10 Manufacturing (D)

	NACE D	Output	IC	GVA	
1	Basis for NA figures	<b>99307</b>	<b>70417</b>	<b>28890</b>	} Data valid.
2	Allowances and adjustments	<b>-28</b>	<b>94</b>	<b>-122</b>	
3	Balance-sheet result	<b>99279</b>	<b>70511</b>	<b>28768</b>	
4	Reallocations for national accounting	<b>416</b>	<b>-254</b>	<b>670</b>	} Conceptual adjustment

	Reallocations for alignment with ESA 95	<b>416</b>	<b>-254</b>	<b>670</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>416</b>	<b>-254</b>	<b>670</b>	
5	National-accounting result (rounded)	<b>99695</b>	<b>70257</b>	<b>29438</b>	
6	Macroeconomic reconciliation adjustment	<b>348</b>	<b>-1336</b>	<b>1684</b>	} Balancing
7	<b>Final NA estimate</b>	<b>100043</b>	<b>68921</b>	<b>31122</b>	

Manufacturing, or industry, is understood as the mechanical or chemical processing of organic or inorganic materials into new products irrespective of whether the work is performed mechanically or manually, in a factory or at the worker's residence. According to the definition, the assembling of products is considered to be manufacturing.

The calculation of Industries C and E is also presented here because the calculation methods of Industries C, D and E are similar to each other.

### 3.10.1 Main data sources and ensuring exhaustiveness

The key industrial activity data sources for national accounts estimates are Structural Business Statistics for manufacturing, the Business Register, the VAT Payments Register and the PAYE Register (Employee's Advance Tax Declarations Register), Local government financial statistics, the Labour Force Survey and various indices.

The Business Register covers practically all industrial activities in the country, but its information content is scanty from the accounting standpoint. So, the structural business statistics for manufacturing, whose content and concepts satisfactorily meet accounting needs, have become the most crucial data source for national accounts estimates.

#### 3.10.1.1 Structural Business Statistics for manufacturing

##### Target population

The annual structural business statistics for manufacturing are what is termed total survey. The target population contains about 29 000 establishments. The data are prepared for each unit of the target population. They are obtained either directly from the enterprise (questionnaire form) or generated from registers. Only 14% of manufacturing establishments are part of the survey (termed a direct questionnaire sample). The sample covers roughly 92% of production value and 84% of staff. Data on enterprises/establishments not surveyed are based on administrative registers: the direct business income tax register (EVR) supplied by the National Board of Taxes and Statistics Finland's Business Register.

The former contains data on the profit and loss statements, balance sheets and fixed assets of all companies subject to taxation. The latter is a basic register of individuals or units engaged in economic activity; they are registered employers, those subject to value-added tax and those registered

into a prescribed payments system. The data are used for manufacturing statistics of businesses not included in the direct inquiry. For enterprises excluded from the questionnaire inquiry profit and loss account and balance data and some other items of data are derived from the business income tax register (EVR). Because the contents of the administrative data is not as exhaustive as it is in the direct questionnaire, some of the data (the missing variables) have to be estimated mathematically (imputed).

Enterprises and establishments in manufacturing with a staff of 20 or more are within the remit of direct data collection for financial statement data. The questionnaire form also applies to firms and establishments with less than 20 staff, if the activities and investment levels are on a par with those in the direct questionnaire. Also included are all electric power companies and their establishments. Non-industrial businesses with staffs of 20 or more were asked for information on manufacturing establishments. Any industrial local government enterprise and unincorporated state enterprise with a staff of 20 or more persons are also included in the questionnaire.

### *Statistical unit*

An enterprise and an establishment are the units used in structural business statistics. In the national accounts, the establishment is the primary statistical unit. Enterprise related data are only used if establishment data are not available. In effect, most enterprises are single-establishment enterprises, they use only one establishment. Also, the practice of producing data for small enterprises from a register means that such enterprises are treated as single-establishment enterprises. The establishments of bigger enterprises can be engaged in activities that differ considerably.

An establishment is an economic unit engaged in the production of goods and services that are as alike as possible under individual proprietorship or control, ordinarily in one location. The establishment as such can form the enterprise (in a single location) or be a designated part of an enterprise (multiple location/multi-activity company). In structural business statistics as a rule, municipality is the location unit of an establishment.

The establishment need not include activities that are classed as manufacturing, but can include so-called support activities and services, which with respect to their location are connected to the establishment in question. Such auxiliary units are the head or central administrative office, main warehouse or equivalent, the research and development unit, sales office, repair shop or other factory service department and establishments still under construction (an investment establishment, i.e. an establishment where production activities have not yet been started).

The data on the activities of the auxiliary unit can be included in the data of the actual establishment if the unit operates in close conjunction with the establishment in question and serves it for the most part. If the support unit is in a location other than the actual establishment, or if it serves several units of the same enterprise, it can form a separate unit.

In structural business statistics, management activities (head offices) of production enterprises and of production related enterprises are classified under the industry of the parent company. The Business Register started a corresponding practice from the statistical year 2004. Previously

management activities of holding companies and head offices of production enterprises were classified as part of holding companies in Industry 74150 in the Business Register.

The general aim of the Business Register is to classify each establishment exactly under its main industry. In structural business statistics, on the other hand, it is not effective from the standpoint of data collection to divide very small units. The purpose of structural business statistics is to portray all manufacturing activity as a single entity with structures and changes. For example, many establishments which are classified in the Business Register under research and development (Industry 73) are part of manufacturing estimates in the national accounts.

### *Industry*

In structural business statistics, the branch of activity of an establishment is determined according to the sales values of the commodities it produces. The first four digits of a commodity's PRODCOM Code reveal the industry producing it. The branch of activity of an establishment is defined by the industry related commodities it principally produces.

The branch of activity of a multi-activity enterprise is determined on the basis of the value added of its establishments. The Business Register identifies and registers the branch of activity of the companies and establishments not included in the direct inquiry.

#### **3.10.1.2 Ensuring exhaustiveness by means of other data sources**

Industrial establishments in non-industrial enterprises with less than 20 staff are by definition not in the target population of structural business statistics for manufacturing. Data on such establishments are to be found in the Business Register. A comparison between structural business statistics and the Business Register enhances exhaustiveness for a number of small businesses for which no suitable pairing exists in the business income tax register or for which data are so superficial or incorrect that they cannot be imputed mathematically.

Data on local government quasi-corporated power stations and waterworks with a staff of less than 20 persons are obtained annually from local government financial statistics. Personnel data on other quasi-corporated local and central government enterprises classed as manufacturing with staffs of less than 20 are obtained from the public enterprise register, other data are estimated. The significance of those units is minimal.

Only companies which meet the size requirements and have operated in principle longer than six months are chosen for the Business Register and structural business statistics target population each year. The size requirements in the statistical year 2004 were: the number of full-time equivalent personnel had to exceed 0,5 person-years or the turnover amount had to exceed EUR 9,187. Data on small companies excluded are to be found in a structural business statistics file especially produced for national accounts. The data are supplemented with the VAT and PAYE data (MAVA). The MAVA data also cover adequately companies operating for only part of the year.

What is termed the hidden economy is not separately valued for the output of manufacturing activity in national accounts estimates. Research indicates that its bearing on industry is relatively minor, according to tax auditing statistics roughly EUR 50 million. The comprehensive level of employment estimated on the basis of the Labour Force Survey and the Business Register raises the wage bill of manufacturing compared with the structural business statistics. Part of that can be seen as being due to the hidden economy. When balancing the accounts, revisions are made to the output and intermediate consumption of manufacturing, which increase the value added. For this reason and with consideration to the minor significance of the hidden economy in manufacturing, the output of the hidden economy is not evaluated separately.

### 3.10.2 Calculation method

National accounts calculations are produced mainly through structural business statistics for manufacturing. These structural business statistics follow the standard industrial classification (SIC) introduced in 1995. Figures for five-digit (as a rule) industrial classification are then aggregated for publication at the two-digit or three-digit level. Calculation methods are identical for all branches of industry (CDE).

#### Output

Output components comprise the value of manufacturing production, commissions on merchandise and revenues from other activities.

Detailed turnover data on each establishment for calculation purposes are to be found in structural business statistics. The turnover corresponds to the sales revenue of principal activity. Adjustments to gross sales such as discounts, value-added tax and other taxes directly based on the sales amount are deducted from the sales revenue. In addition to adjusting items, deductions from sales are also made for current transfer and transit items. No deduction in turnover is made for paid sales freight, commissions or bad debts.

Turnover includes intra-company internal deliveries which are valued in the same way as external deliveries. If an enterprise's internal deliveries cannot be valued based on their real market price, they are valued based on production costs.

Turnover for manufacturing activity is itemised as follows:

- Product deliveries: the total value of deliveries of products which have been manufactured in the establishment or produced as contract work in other establishments.
- Delivery of electricity produced: establishment electricity sales.
- Delivery of heating produced: establishment heating sales.
- Power grid activity: turnover from electricity distribution through a power grid.
- Manufacturing repair and installation deliveries: turnover from external deliveries of manufacturing repair, installation and maintenance work (also includes supplies recorded in billing).
- Contract work: turnover from contract work performed for another unit. Materials and supplies used are mostly owned by or under the control of the supplier.

The value of production is derived from the value of deliveries by taking account of changes in current asset inventories (finished goods and work-in-progress) that take place during the year.

The value of current assets is calculated at purchasers' prices at start and end of the year. Data are to be found in structural business statistics by kind of current assets: fuels, other materials and supplies, work-in-progress, products, merchandise and other current assets. The establishment's stocks are counted as current assets whether they are located in the establishment or in separate warehouse units.

Inventories in the national accounts (excluding work-in-progress and other current assets) are valued at average prices for the year. The opening and closing stocks of products are changed into average prices proper to each industry by means of the producer price index for manufactured products. Changes in inventories are calculated as the difference between the opening and closing stocks at average prices. The method is not applied to work-in-progress. Instead, changes in inventories follow the concept of price in structural business statistics (which in principle is valued on the basis of implemented production costs).

**The value of manufacturing production** consists of the value of the products delivered (including sales of electricity and heat and grid operations), the value of repair work done for clients and payments received from clients for manufacture and other sold services (contract work) increased or decreased by changes in stocks of products and work in progress.

Output at basic prices is calculated by adding the sales margin on merchandise and the revenues from other activities to the value of manufacturing production.

Industrial establishments obtain some gross income by selling goods that are not manufactured at the establishment, but purchased for sale "as is" without any further processing. For these **so-called merchandise**, output only includes **a sales margin** (commission), got by deducting the purchase price from the sales price (data from structural business statistics) and adding changes in inventories. The latter are calculated at average prices. The average price of opening and closing inventories is obtained by using the total index of the basic price index for domestic supply. The resale (brokerage) of purchased electricity and heat is treated as the sale of merchandise.

Data on **revenues from other activities** included in output at basic prices are to be found in structural business statistics. This item includes turnover from agriculture and forestry, construction activities, commission trading and other service activities, e.g. rental income on fixed assets, proceeds from patents, licences and royalties and payments for various non-manufacturing services. Capital gains on sales of fixed assets and mergers are not treated as profit on production activity.

The level of output on all industrial activity is calculated by adding to the item counted from the structural business statistics the turnover for manufacturing establishments of non-industrial enterprises with under 20 staff, omitted small enterprises and missing local government unincorporated power stations and waterworks. Data are to be found in the

Business Register, the PAYEE data and in the statistics on the finances of municipalities.

### *Intermediate consumption*

Intermediate consumption for manufacturing comprises three accounting elements: so-called manufacturing costs, rents and miscellaneous expenses. Data are to be found in structural business statistics.

Structural business statistics survey questionnaires ask the value of factor inputs acquired in the calendar year for establishments according to a given classification.

Factor inputs are evaluated at the purchasers' prices, i.e. purchaser price delivered on site excluding value-added tax. In evaluating acquisitions, expense adjusting items and expense transfers should be taken into account. The adjusting items for purchases are freight and forwarding, packing and other costs. The deductions on purchases recorded include not only value-added tax, but also discounts obtained and sales at initial cost to company staff.

Factor inputs acquired from other establishments of an enterprise are valued as purchases from third parties. Unless intra-company purchases can be valued based on their actual market price, they should be valued based on production costs.

The following acquired factor inputs are counted as **manufacturing costs**:

- Acquisitions of materials and supplies: Counted as materials and supplies are those materials used directly in preparing goods to be produced (raw materials, semi-finished products, additives, parts and lightweight non-activated tools and equipment). They also include auxiliary supplies (lubricants, water and the like) but not office supplies and other such supplies.
- Acquisition of packing materials: materials and supplies used to pack goods manufactured by the establishment or merchandise delivered by it.
- Acquisition of fuels: materials acquired for an enterprise's productive activity or as an energy source for its vehicles are treated as fuels.
- Acquisition of electricity for own use: acquisition of electricity includes electricity used in a production process as well as electricity used to light, heat, ventilate, etc. the premises.
- Acquisition of heat for own use: heating used in a company's production process as well in heating spaces is treated as the acquisition of heating energy.
- Repair, maintenance and installation contract work: repair, maintenance and installation work contracted to others including the value of invoiced materials.
- Contract work: contract work comprises compensation paid by the establishment for work it has contracted out to other economic units from its own raw materials. Printing and other work in the publishing business.
- Subcontracting: a subcontractor is someone contracted by a main contractor. Subcontracts are work for which subcontractors are paid by a main contractor.

The value of **used** intermediate production inputs is derived from the above **acquired** intermediate production inputs by taking into account the changes in current assets inventories (materials, supplies and fuel supplies, other current assets) occurring in the calendar year.

It was mentioned above that the value of current assets is to be found in structural business statistics at the start and end of the year as valued at purchasers' prices by particular current assets categories: fuels, other materials and supplies, work-in-progress, products, merchandise and other current assets.

Inventories in the national accounts (excluding work-in-progress) are valued at average prices for the year. Opening and closing inventories of fuel for the year are changed into average prices by means of the subitems in the basic price index for domestic supply: coal, nuclear fuel and oil products. The opening and closing stocks of other materials and supplies (principally raw materials) and other current assets are changed into average prices for the industry by means of the basic price index for domestic supply. Changes in inventories are calculated as the difference between the average prices for opening and closing inventories.

The **fixed asset rental expenses** proper to each fixed asset are to be found in structural business statistics. Counted as intermediate consumption are rent expenses on non-residential building, civil engineering and other structures, machinery and transport equipment and the item "Other Rents". The last item, with respect to electricity, gas and water supply and the "sale and lease back" operations of power plants, is actually payments for financial leasing that is not part of IC but is treated as interest payments and instalments of a loan.

The structural business statistics survey seeks to establish the rental expenses on fixed assets rented by an enterprise/establishment by means of leasing contracts. The item includes rental expenses of fixed assets using operating leasing as well as financial leasing contracts. Only operating leasing contracts are treated as intermediate consumption in the national accounts. Data on financial leasing payments are available only by primary industry (Industry C, D, E). Financial leasing payments deducted from intermediate consumption are broken down among subindustries in the ratio of structural business statistics leasing rents. A description of financial leasing statistics is found in Chapter 11.

The value of **other factor inputs acquired** includes the annual expenses of the so-called non-industrial services from other parties and of the supplies which are not included in current assets.

Such expenditure items consist of: contracted research and development work, transport and storage services, real estate maintenance services, communications services (Post, telephone, telecommunications), advertising services, marketing and sales services, software design and programming services, training services, patent, licence and royalty expenses, administration and other expenses not mentioned above (banking, legal, accounting, insurance, union organisation and other such services). Data are obtained in itemised form from structural business statistics.

Businesses have the potential of activating research and development expenses for the balance sheet. An estimate of the activated expenditure is

added to intermediate consumption. The estimate is made on the basis of enterprise-based balance data (intangible assets: research and development expenditure).

Computer systems and applications produced for computer programmes, their descriptions and other supplementary material are included in intangible fixed assets (gross fixed capital formation) in the national accounts. This includes software purchased as well as software produced for own use whenever the production cost is considerable. This includes significant expenses for the purchase, development and expansion of databases if the databases will be used for longer than a year. Part of the acquisition costs of software and some other expenses mentioned above are included in structural business statistics under the item "Software design and programming services", part of it is activated directly to the balance sheet. In national accounts for manufacturing, 30% of this item is deductible from intermediate consumption. The share is estimated by comparing the total level of software investments with those data obtained in the structural business statistics inquiry. In the questionnaire enterprises are asked about investments in computer software as supplementary balance sheet data.

Data on capital losses on mergers and sales of fixed assets included in other expenses in the profit and loss account are derived from structural business statistics. These items are not recorded in intermediate consumption.

Other expenses in the profit and loss account also comprise a number of other expense items, which are not treated as intermediate consumption in the national accounts. Such are part of benefits in kind, part of insurance premiums on property, real estate taxes and other taxes on production. An estimate is made of benefits in kind by comparing the wage and salary data in the Business Register and in the structural business statistics. Industry-specific data on other taxes on production are derived from centralised calculations. Data are available on insurance contributions on property and real estate taxes on the level of the entire business sector only. A rough estimate is made of the share of manufacturing by means of capital stock data.

The level of intermediate consumption in all industrial activity is attained when the item calculated from the structural business statistics is supplemented by the intermediate consumption of the manufacturing establishments of non-industrial enterprises with under 20 staff and the omitted small enterprises. The proportion of intermediate consumption to output for these companies is the same as that calculated in structural business statistics for companies with under 20 staff at the five digit level of industrial classification. The missing intermediate consumption of local government unincorporated power stations and waterworks is calculated from the Economic Statistics of Municipalities.

### 3.11 Electricity, gas and water supply (E)

	NACE E	Output	IC	GVA	
1	Basis for NA figures	<b>5592</b>	<b>2679</b>	<b>2913</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>5592</b>	<b>2679</b>	<b>2913</b>	} Conceptual adjustment
4	Reallocations for national accounting	<b>90</b>	<b>-100</b>	<b>190</b>	
	Reallocations for alignment with ESA 95	<b>90</b>	<b>-100</b>	<b>190</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>90</b>	<b>-100</b>	<b>190</b>	} Balancing
5	National-accounting result (rounded)	<b>5682</b>	<b>2579</b>	<b>3103</b>	
6	Macroeconomic reconciliation adjustment	<b>62</b>	<b>66</b>	<b>-4</b>	
7	<b>Final NA estimate</b>	<b>5744</b>	<b>2645</b>	<b>3099</b>	

Electricity, gas water supply include the production, transfer, sale, supply and brokering of electricity and heating energy, the production and supply of town gas and the purification and distribution of water to communities. Generation of electricity by individual industries to serve manufacturing needs is usually statistically recorded in conjunction with the particular industry.

Calculations for this industry are explained in Section 3.10. Industry, where the calculation of Industries C, D and E is shown.

### 3.12 Construction (F)

	NACE F	Output	IC	GVA	
1	Basis for NA figures	<b>18796</b>	<b>10664</b>	<b>8132</b>	
2	Allowances and adjustments	<b>23</b>	<b>851</b>	<b>-828</b>	} Data valid.
3	Balance-sheet result	<b>18819</b>	<b>11515</b>	<b>7304</b>	
4	Reallocations for national accounting	<b>2</b>	<b>146</b>	<b>-144</b>	} Conceptual adjustment
	Reallocations for alignment with ESA 95	<b>2</b>	<b>146</b>	<b>-144</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>2</b>	<b>146</b>	<b>-144</b>	
5	National-accounting result (rounded)	<b>18821</b>	<b>11661</b>	<b>7160</b>	
6	Macroeconomic reconciliation adjustment	<b>38</b>		<b>38</b>	} Balancing
7	<b>Final NA estimate</b>	<b>18859</b>	<b>11661</b>	<b>7198</b>	

Construction is divided into three subindustries: Construction of complete buildings and parts thereof, Civil engineering, and Construction services activities.

#### 3.12.1 Construction of complete buildings and parts thereof (4501)

Construction of complete buildings and parts thereof consists of the following TOL2000 Industries:

General construction of buildings	45211
Erection of roof covering and frames	45220
Other construction work involving special trades	45250
Building installation	45300
Installation of electrical wiring and fittings	45310
Insulation work activities	45320
Installation of heating, plumbing and ventilation	45330
Other building installation	45340
Building completion	45400
Plastering	45410
Joinery installation	45420
Floor and wall covering	45430
Painting and glazing	45440
Painting	45441
Glazing	45442
Other building completion	45450

### 3.12.1.1 *Main data sources*

The main sources for calculation purposes are Statistics Finland's construction of buildings statistics, the Business Register, structural business statistics for construction and the Labour Force Survey.

The current price and fixed-price value of new construction by owner and building category are to be found in construction industry statistics prepared by the Business Trends department. Calculating the value of new construction is based on data entries in registers of project initiation and completion levels gathered by local authority building control officers at estimated prices per cubic metre. All new construction of buildings is conditional on a permit. Commercial and so-called own-account new construction, and hidden economy construction, are included in the value of new construction. The price index of new construction is obtained implicitly through the relation between current price and fixed price values of production.

### 3.12.1.2 *General calculation method*

The production and generation-of-income accounts in the industry Construction of complete buildings and parts thereof are calculated both for the industry as a whole and for builders by sector. The latter comprise not only non-financial corporations, but local government and households as well. Self-built construction of buildings is treated as own-account construction.

Output is calculated in two ways: by individual construction sector and as the total of new construction and renovation. Intermediate consumption is calculated as part of output at current prices, by means of Structural Business Statistics.

In conjunction with the reform of supply and use tables, industry production was divided into principal production and secondary production. Only industry that is principal production is recognised in the national accounts. In the sectors 'S111 Non-financial corporations' and 'S14 Households', construction of buildings is principal production. Due to the scarcity of source data, 'S1313 Local government' construction of buildings cannot be separated from the other local government activities. Consequently, local government construction is described as secondary production and included in the production of other local government industries. FISIM for the industry is taken from centralised calculations.

### 3.12.1.3 *Calculation by economic activity*

#### *Output*

The output of building construction is calculated as the value of new construction and renovation combined. For investment purposes, this is calculated by means of building type (non-residential buildings, other buildings) and by type of construction (new work, refurbishment and yearly repairs). It is hard in practice to draw a line between refurbishment and yearly repairs. In print publications, refurbishment or improvement is often commonly defined as repairs which make a building more suited to its purpose and result in better quality or value in the building than before.

Yearly repairs, or maintenance, are defined as an ordinary, regular procedure intended to keep the building at a quality level not higher than the original. For calculation purposes, refurbishment is classed as investment and yearly repair is classed as intermediate consumption.

**Table 12. Determining the output of building construction**

VOLUME OF NEW CONSTRUCTION	PRICE DATA	VOLUME OF RENOVATION
<b>Building supervisory authorities of municipalities</b> * New construction and extensions * Delay 7 weeks  <b>Data content (includes)</b> * Purpose of building * Investors (Owner category) * Volume of building (cubic metre) * Standard classifications * Number of floors * Construction method	<b>Construction of buildings cost data</b>  * (Haahtela Kehitys Oy)  <b>Data content (includes)</b> * Purpose of building * Volume of building (cubic metre) * Number of floors * Standard classification * Prices by region * Construction method	<b>Statistics Finland</b>  * Business trends * Labour Force Survey hours worked  <b>Data content</b> * Volume of renovation * Commercial renovation
OUTPUT OF NEW CONSTRUCTION AT BASIC PRICES	OUTPUT OF RENOVATION AT BASIC PRICES	
* At current and constant prices * Includes developer's profit margin * 14 Owner categories --> sector division * Own-account/commercial new construction * 14 Purpose of building categories --> dwelling/other new construction	* At current and constant prices * Includes developer's profit margin * Commercial renovation	

### *New construction*

The values of newly constructed non-residential buildings and other buildings at current prices are obtained from Statistics Finland's building construction statistics (cf. Table). The new construction also covers the developer's costs (the design, insurance and financing fees), which account approximately 10 per cent of the value of the new construction. New construction is valued as for commercial building construction. A total of 4.5% of the value of new construction is foundation construction, which according to the Standard Industrial Classification, should be civil engineering work, but is included in building construction. This factor must be taken into account in projections for employment and wages and salaries in construction of buildings.

**Table 13: Output of Construction of complete buildings and parts thereof in 2004, EUR million**

Dwellings	Non-residential buildings	All construction of buildings
-----------	---------------------------	-------------------------------

New construction	5 848	4 554	10 402
Renovation	3 975	2 495	6 470
Yearly repairs	1 688	1 243	2 931
Refurbishment	2 287	1 252	3 539
Total	9 823	7 049	16 872

## *Renovation*

Renovation output is based on data on the level of renovation derived from repeated surveys. The surveys are conducted by the construction industry laboratory of the Technical Research Centre of Finland (VTT). Surveys were conducted in 1990 (KORVO90), 1995 (KORVO95) and 2000 (REMO2000). The value of renovation measured by type of building was adjusted following sample surveys. The split between yearly repairs and refurbishment is based on REMO2000 that includes an estimate of both types of renovation. In the revision of 2009 the concept of renovation was broadened to cover the developer's costs in case of refurbishment. The share of the developer's costs is estimated from the new construction information.

Between the renovation surveys, the value of the renovation is estimated with the annual price and volume changes. In case of the refurbishment, the prices of the new building of the dwellings and the non-residential buildings are used. In case of the yearly repairs of both the dwelling and the non-residential buildings it is resorted to the dwelling renovation sub-index of the Building cost index. There are no producer price indices for the renovation available. The volume change of the renovation is based on the working hours of renovation in Labour force survey. The renovation survey directed at the major construction companies is used as a reference data to the value change of the renovation.

Between the renovation surveys, there are some reference sources such as the household budget survey and the statistics on the finance of housing corporations for the renovation of the dwellings. These sources are not available annually or do not cover the whole phenomenon of the renovation of the dwellings and thus cannot be used as such. For the renovation of the non-residential dwellings there are no reference data sources.

## *Output by sector*

### *S111 Non-financial corporations*

#### *Output*

Basically, the output of non-financial corporations is calculated using data on establishments in the Business Register and Structural Business Statistics for building construction. Output without exports is estimated by means of turnover in the Business Register. Output equals the total of turnover (excluding subcontracting), changes in stocks of finished goods, own-account production, and other business activities. Output of the non-financial corporations sector is reflected as the residual of the combined output of all construction of buildings (new construction and renovation) and other sectors (S14 Households, S1313 Local government).

The production of non-financial corporations belongs to producer type 'T10 Market producers' and their output is described, practically speaking, only as market output (P11). Only computer software produced by non-financial corporations is entered as output for own final use (P12).

### *Intermediate consumption*

The output-intermediate consumption ratio of non-financial corporations is calculated from Structural Business Statistics data. Intermediate consumption is defined as the total of purchases less changes in inventories, external services, (excl. subcontracting), leasing payments (excl. financial leasing), other rents and other expenses. The value of intermediate consumption is determined as through level of output and output-intermediate consumption ratio.

**Table 14: Output of construction of buildings, intermediate consumption and value added by sector in 2004, EUR million**

	P1	P11	P12	P2	B1G
Non-financial corporations	13 522	13 518	4	8 816	4 706
Households	3 220	1 961	1 259	1 721	1 499
Entrepreneurs	600	600	0	287	313
Own-account construction	2 136	877	1 259	1 313	823
Hidden	484	484	0	121	363
Local government	87	87	0	55	32
Total	16 829	15 566	1 263	10 592	6 237

### *S1313 Local government*

#### *Output*

Output of **local government** construction of buildings is calculated using data in Table 5 (Analysis of expenditure and revenue) of the financial statistics of municipalities and joint municipal authorities as the total of new construction and yearly repairs.

The total of Item A "Self-managed construction, total buildings" for items such as staff costs, materials, supplies, goods and miscellaneous expenses in the financial statistics is treated as the price of local investment in the construction of buildings. When the share of construction and subcontracting of real estate developed by local government is subtracted from the sum in question, what is left is the local government's output of new construction of buildings. This real estate development is determined by the developer's costs coefficient to be found in the building production statistics and as income from investment cost construction of buildings. Local government subcontracting is to be found in financial statistics under the Services item of municipalities and joint municipal authorities.

The level of local government yearly repairs is determined by Construction materials under item 'Materials, supplies and goods'. In 2004, yearly repairs covered roughly 60% of all local government construction of buildings.

Local government production belongs to producer type 'T30 Other non-market producers'. The output of local government new construction of buildings is reflected as output for own final use (P12). The output of yearly repairs is recorded as other non-market output (P13).

## *Intermediate consumption*

The intermediate consumption of local government construction of buildings is calculated in two stages. Intermediate consumption of new construction is determined using data in Table 5 (Analysis of expenditure and revenue) of the financial statistics of municipalities and joint municipal authorities as the total of items 'Materials, supplies and goods' and 'Other expenditure'. As far as yearly repairs are concerned, intermediate consumption is assumed to cover half the output.

Due to a difference of method, the share of intermediate consumption in new construction of buildings differs from that of renovation. In new construction, the intermediate consumption can rise, depending on the year, to 59-60% of the output. The difference of method in determining intermediate consumption can be considered to be well-founded in respect that the extent of work involved in yearly repairs is greater than in new construction.

## *S14 Households*

### *Output*

#### **T10 Market producers**

Market producers in the household sector are self-employed persons and shadow economy workers. The production of both is counted as market output (P11).

Self-employed households are all business and professional persons whose employees in the working year number less than two. Output is calculated as the total output of items from the Structural Business Statistics and Business Register data.

The output of shadow economy workers is derived from the imputed hours worked by such persons. The hourly price for own-account construction is used as the hourly wage. Output is calculated as in own-account construction. The intermediate consumption share of output is assumed to be 25%, i.e. the output consists mainly of added value, in this instance the value of the work done, because capital consumption is not counted for income that is undeclared. It is assumed that construction shadow economy workers mainly work for households who acquire the construction materials needed.

#### **T20 Producers for own final use**

In own-account construction of buildings, new construction and renovation are counted as Output for own final use (P12); yearly repairs are recorded as market output (P11). The recording of yearly repairs as market output is based on the fact that production in this case is used as the intermediate consumption of another industry ('7021 Ownership and letting of dwellings).

The value added of own-account construction of buildings is derived from the imputed hours worked and the hourly construction wage, omitting employers' social contributions and non-wage costs. The intermediate consumption share is estimated to be 65%. Because neither compensation of employees nor capital consumption is counted into own-account construction, the value added share of output is 35%. The output of own-

account construction of buildings is the total of added value and intermediate consumption.

### *Intermediate consumption*

#### **T10 Market producers**

The intermediate consumption share of the output of construction of shadow economy workers is assumed to be a stable 25% of output. The intermediate consumption share of the output of self-employed persons is determined on the basis of Structural Business Statistics and Business Register data.

#### **T20 Producers for own final use**

The share of intermediate consumption is fixed at 65% of output.

### **3.12.2 Civil engineering (4502)**

Civil engineering comprises the following SIC95 Industries:

Demolition and wrecking of buildings; earth moving	4511
Test drilling and boring	4512
Construction of bridges, tunnels, electricity lines, etc.	45219
Construction of motorways, roads, airfields and sport facilities	4523
Construction of water projects	4524

Snow ploughing, sanding and salting of roads belongs to Industry 90003.

#### **3.12.2.1 Main data sources**

The main data sources regarding non-financial corporations are the Structural Business Statistics (business income tax register EVR, the Business Register and direct inquiry) and the Establishment Register of the Business Register, which are both total surveys. The extent of foundation work related to construction of buildings is estimated on the basis of Statistics Finland's building construction data.

The principal local government data sources are the financial statistics of municipalities and joint municipal authorities and data in the Government of Åland's financial statement and report. FISIM for the industry is taken from centralised calculations.

#### **3.12.2.2 Calculation method**

The civil engineering production and generation-of-income accounts are calculated at the total of accounts by sector. The civil engineering sectors are non-financial corporations and local government.

#### **3.12.2.3 Calculation by economic activity**

##### *Output by sector*

##### *S111 Non-financial corporations and S14 Households*

##### *Output*

The output of both non-financial corporations and entrepreneur households is calculated as the total of output items in Structural Business Statistics and

the Business Register. Output includes, in addition to subcontracting, the items: turnover, changes to finished product inventories, conversion for own use and other output. After this, the share related to foundation work related to and described in building of complete buildings and parts thereof (industry 4501) is subtracted from output. The extent of foundation work is evaluated from data in Statistics Finland's Building Construction Statistics.

Non-financial corporations belong to the producer type 'T10 Market producers'. In practice, their production is market production in its entirety (P11). Output for own final use (P12) consists of own-account produced computer software and amounts yearly to EUR 1-2 million.

### *Intermediate consumption*

The intermediate consumption of non-financial corporations, too, is calculated using data from Structural Business Statistics and the Business Register. Intermediate consumption covers subcontracting in addition to normal intermediate consumption items.

### *S1313 Local government*

#### *Output and intermediate consumption*

The account for local government civil engineering production is in two parts. Maintenance is calculated on the basis of the municipal finances' account task "460 Traffic routes". This task category yields compensation of employees, intermediate consumption and sales items. The corresponding figures for the Government of Åland are added to these figures. Additionally, value-added tax is added to intermediate consumption. The output (P1) is obtained as the total of added value and intermediate consumption and it is divided into sales items (P11, P139 and P13). The P13 item to be factored into government final consumption expenditure is obtained as a residual (P1 – P11 – P139).

Other new construction of civil engineering is based on investments information. The source used is the total of civil engineering investments in industries other than '6302 Road development'. The item covers new construction other than roads and streets. Because the municipality's technical department produces these construction services, this investment demand must also exist in civil engineering output in order to balance supply and demand. Due to the scarcity of source material, all the output is considered as market output (P11). The cost of the service provided by the municipality can be broken down by dividing the output from Table 5 of municipal financial statistics by the ratio of intermediate consumption and staff costs to compensation of employees and intermediate consumption. The intermediate consumption demand item is considered to be purchased in its entirety from outside suppliers, so that the supply balancing demand is found on the market side.

**Table 15. Output, intermediate consumption and value added in Civil engineering by sector in 2004, in millions of euro**

	P1	P11	P12	P139	P13	P2	B1G
Non-financial corporations	3 695	3 694	1	0	0	2 237	1 458
Local government	657	262	0	136	259	538	119

Households	199	199	0	0	0	124	75
Total	4 551	4 155	1	136	259	2 899	1 652

### 3.12.3 Construction services activities (4509)

Construction services activities consist of Industry 455 "Leasing of construction machinery and operators". The industry comprises the following activities:

- leasing of cranes, hoisting platforms, construction site lifts, etc. machinery and equipment, including their operators
- leasing of diggers, bulldozers, drilling machines, dredges, etc. civil engineering machinery and equipment, including their drivers and operators
- leasing of machinery and equipment for the demolition of buildings, including their operators

Construction services activities are intermediate consumption of construction of buildings and civil engineering work. Production in the industry exists in the non-financial corporations and households sectors. Production in both sectors is recorded under producer type "T10 Market producers" and transaction "P11 Market output".

The main data sources for calculations are Statistics Finland's Business Register, structural business statistics and the Labour Force Survey. FISIM for the industry is taken from centralised calculations.

#### Output

The output of the industry at basic prices consists of income items in Structural Business Statistics and the Business Register, i.e. the total of turnover, changes in stocks of finished goods, own-account production and other operating income.

#### Intermediate consumption

Intermediate consumption is calculated as a share of output using data specific to non-financial corporations. Intermediate consumption is purchases less the total of changes in inventory, external services, leasing income, other rental income and other costs.

**Table 16. Output, intermediate consumption and value added in Construction services activities in 2004, in millions of euro**

	P1	P11	P2	B1G
Non-financial corporations	189	189	78	111
Households	6	6	2	4
Total	195	195	80	115

### 3.13 Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods (G)

	<b>NACE G</b>	<b>Output</b>	<b>IC</b>	<b>GVA</b>	
1	Basis for NA figures	<b>24570</b>	<b>11811</b>	<b>12759</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>24570</b>	<b>11811</b>	<b>12759</b>	} Conceptual adjustment
4	Reallocations for national accounting	<b>158</b>	<b>-1149</b>	<b>1307</b>	
	Reallocations for alignment with ESA 95	<b>158</b>	<b>-1149</b>	<b>1307</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>158</b>	<b>-1149</b>	<b>1307</b>	
5	National-accounting result (rounded)	<b>24728</b>	<b>10662</b>	<b>14066</b>	} Balancing
6	Macroeconomic reconciliation adjustment	<b>1605</b>	<b>1655</b>	<b>-50</b>	
7	<b>Final NA estimate</b>	<b>26333</b>	<b>12317</b>	<b>14016</b>	

The calculation of Industry H is also presented partly here because the calculation methods of Industries G and H are similar to each other regarding source data.

#### 3.13.1 Industry designation

In the system of accounts, the wholesale and retail trade is divided into five subindustries. This makes the compiling of national income estimates easier because in the system the repair and maintenance industries (502 “Maintenance and repair of motor vehicles”, 527 “Repair of personal and household goods”) are calculated as separate industries and the accounting principles applied to them are different from those used in other trade industries.

In national income calculations, trade industries consist of five two-digit or three-digit level categories as follows:

Industry 501, "Sale of motor vehicles and retail sale of automotive fuel", includes all wholesale, brokerage and retail sale of new and used motor vehicles and retail sales of fuel and lubricants. In accordance with the TOL2002 Standard Industrial Classification, this category includes three-digit level and five-digit level industries as follows:

- 501 Sale of motor vehicles
- 503 Sale of motor vehicle parts and accessories
- 50401 Wholesale of motorcycles and related parts and accessories

50402 Retail sale of motorcycles and related parts and accessories

505 Retail sale of automotive fuels

Industry 502, Maintenance and repair of motor vehicles, includes the maintenance and repair of motor vehicles other than at service stations and the installation, repair and studding of tyres other than at service stations or during manufacture. It contains the corresponding three-digit industry category in accordance with the TOL2002 Standard Industrial Classification and five-digit level industry 50403 Maintenance and repair of motorcycles.

Industry 51, Wholesale trade and commission trade (except of motor vehicles), consists of the resale of new and used goods to retailers and other wholesalers and of sale for conversion and allows a purchaser to either acquire ownership of the goods (wholesale) or not (commission trade). It includes the corresponding two-digit Industry 51.

Industry 521, Retail trade (except of motor vehicles), contains the sale to consumers for personal and household use of new and used goods. This category contains the following three-digit industries in accordance with the TOL2002 Standard Industrial Classification:

521 Retail sale in non-specialised stores

522 Retail sale of food, beverages and tobacco in specialised stores

523 Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles

524 Retail sale of other new goods in specialised stores

525 Retail sale of used goods in stores

526 Other non-store retail sale

Industry 527, "Repair of household goods" includes the repair as a principal activity of footwear, household electrical appliances, watches, clocks and jewellery, for example. The repair of personal and household goods contains the corresponding three-digit Industry 527 category in accordance with the TOL2002 Standard Industrial Classification.

### **3.13.2 Main data sources**

The main data sources for national income estimates in the trade sector are those compiled by Statistics Finland: the Business Register, structural business statistics, sales statistics for wholesale and retail sale, the Labour Force Survey and different indices, including the index of wage and salary earnings and the consumer price index.

When compiling the final accounting figures, two key basic statistics are available: the Business Register and the structural business statistics. They are exhaustive aggregate data based on direct surveys conducted of enterprises and establishments and on the tax administration's database.

The advantages of the Business Register are that it is based on industries and it is exhaustive, as it covers practically all commercial activities in the country, but its information content is scanty from the accounting standpoint. The structural business statistics for trade are based on enterprises. Regardless of this, the structural business statistics, whose content and concepts satisfactorily meet accounting needs, have become the most crucial data source for national accounts estimates. The Business Register is used as the basic framework for national income estimates in the

trade sector to determine output, and wage and salary levels. The data of the structural business statistics are supplemented with missing items from Business Register data.

### *Structural Business Statistics for trade*

The annual structural business statistics for trade are what is termed total survey. The target population contains about 47,000 establishments. The data are prepared for each unit of the target population. They are obtained either directly from the enterprise (questionnaire form) or generated from the register. Only 3% (1 400 enterprises) of trade establishments are part of the survey (termed a direct questionnaire sample). The sample covers roughly 65% of production value and 58% of staff. Data on enterprises not surveyed are based on administrative registers: the direct business income tax register (EVR) supplied by the National Board of Taxes and Statistics Finland's Business Register.

The business income tax data are used for trade statistics of businesses not included in the direct questionnaire. Because the content of the administrative data is not as exhaustive as it is in the direct questionnaire, some of the data (the missing variables) have to be estimated mathematically (imputed).

The direct survey applying to the structural business statistics for the statistical year 2004 was sent to all non-financial corporations employing more than 10 persons in the trade sector.

Only companies which meet the size requirements and have operated in principle longer than six months are chosen for the structural business statistics target population each year. The size requirements in the 2004 statistical year were: the number of full-time equivalent personnel had to exceed 0.5 man-years or the turnover amount had to exceed EUR 9 187. Data are obtained about small companies beyond the size limit from the file on excluded enterprises produced by the structural business statistics for the national accounts, which is generated utilising turnover and wage and salary data in the Business Register and structural data of the enterprises included in the target population of the structural business statistics.

### *Sales statistics for trade*

Statistics Finland produces statistics on trade in compliance with the EU's Regulation (No. 1165/98) concerning short-term statistics.

As of the beginning of 2000, Statistics Finland uses a revised method for calculating trade statistics. The calculation method used previously was based solely on so-called estimations of change. As of the beginning of 2000, the calculations will still be based on estimations of change, but they will also include assessments of the impact of enterprise start-ups and closures on the indices that are being calculated. This impact can be estimated provided the data on value added tax supplied by the tax administration are available for the statistical reference month concerned. Because preliminary data can only be calculated from the information collected by Statistics Finland direct from enterprises, estimations of change will continue to be used in calculation of preliminary data, whereas

calculations of final, comprehensive data will take into consideration the impact of enterprise start-ups and closures on the calculated indices.

Information for the preliminary data is collected direct from enterprises because the Tax Administration's payment control data concerning value added tax do not become available to Statistics Finland within the timetable required by the EU's Regulation on short-term statistics. Approximately 630 enterprises from trade, representing the largest ones in their respective industries in terms of turnover, are selected to the direct inquiry.

The Tax Administration's data on value added tax payments, supplemented with those from the direct inquiry are used to calculate trade sales at more detailed levels. Using the taxation data both improves the reliability of the produced statistics and facilitates examining the development of trade sales at more detailed classification levels.

The year 2000 has been introduced as the new base year for the statistics on trade (2000=100). In addition, the weight structures of the price indices of different industries have been updated for the year 2000. Index series by industry have been recalculated from the beginning of the year 2000. The Standard Industrial Classification 2002 (TOL200) has been introduced as the applicable industrial classification, although it does not essentially differ from the previously used classification as far as trade is concerned. The statistics on retail trade are compiled using harmonised price indices complying with COICOP. The observation unit in the data of the tax authorities is an enterprise. In the survey inquiry of major enterprises the basic observation unit is also an enterprise, but to retain the purity of industries, the largest enterprises having activity in multiple industries have been broken down to kind-of-activity units. The used classification of industries is the Standard Industrial Classification 2002, which complies with the EU Regulation and is based on the NACE Rev.1.1 classification that is common to all EU Member States.

The relevance of trade statistics in compiling the annual national accounts becomes clearer, especially when projecting preliminary figures. In keeping with the nature of the short-term statistics, trade statistics are available to investigators sooner than a couple of other key statistics: the Business Register and structural business statistics for trade. Trade statistics offer data not only about development of the value of sales, but also about prices and volume of sales. Trade statistics can be utilised to compile figures at fixed prices.

### **3.13.3 Calculation methods**

To ensure exhaustiveness, the total level of trade industries is defined on the basis of the Business Register. The data of the structural business statistics are, however, used in the estimates as primary sources whenever possible. Data on single-establishment and single-industry enterprises are taken as such from the structural business statistics. Because we know that small enterprises falling below a specific size limit and commercial establishments of non-profit institutions are missing from the structural business statistics, they are added from the Business Register. Commercial establishments of multi-industry enterprises are also added there. The structural data used for the establishments to be added are data calculated from the data of

commercial single or multi-establishment enterprises (e.g. percentage of output of turnover).

Problematic in the described method are particularly large commercial establishments of enterprises belonging to other main industry than trade (e.g. manufacturing). Enterprise-specific analyses are needed to clarify their structure. The calculation is being developed to this end in the limits allowed by the data basis and resources.

The division of value added to sub-industries in the right relation is a problem especially in industry 50 (Sale, maintenance and repair of motor vehicles and motorcycles). In that industry a significant part of enterprises is engaged in both sale and maintenance and repair. There is no genuine structural data on the establishments of these enterprises, but the estimates have to be made utilising average structures. There is a corresponding problem with hotels and restaurants, where enterprises are often practising both hotel and restaurant activities.

National income estimates for trade are produced at the three-digit level and aggregated at the two-digit level.

## *Output*

Output in the trade sector at basic prices comprises market output and output for own final use (computer software).

The majority of market output is formed of the so-called trade margin, or trade commissions, the difference between the purchase price paid and the selling price received by trade.

Estimates of trade industry output (501 "Sale of motor vehicles", 51 "Wholesale trade and commission trade", and 521 "Retail trade") start with turnover. Changes in finished product inventories, production for own use and other return on business activities are all added to turnover, in accordance with structural business statistics. Goods for resale purchased in the financial period are deducted from this, adjusted by the change in purchase inventories.

In other returns on business activities, capital gains on mergers and sales of fixed assets are distinguished from other returns of a more permanent kind, such as rental income. Capital gains on sales of fixed assets and mergers do not count as output because they do not comply with the national accounting concept of income.

The calculation method in use for repair industries (502 "Maintenance and repair of motor vehicles" and 527 "Repair of household goods") differs from that used in other trade industries. In repair industries, the output is approximately equivalent to turnover. In industries such as these, purchases during the financial period and changes in inventories are treated as part of intermediate consumption. The same method is applied to hotel and restaurant industries.

## *Hidden economy*

Several research projects focused on the existence of the hidden economy in trade sectors. Research data were often based either on direct surveys sent to enterprises in the trade sector or on tax auditing data. The consulting firm of

Pekka Rytönen Oy has produced a breakdown of the hidden economy for Statistics Finland.

In the view of experts, the hidden economy does not play a big part in total sales for trade. The main reason is the concatenation of trade around large corporations and the marginal market share of independent small shopkeepers. Based on the 1995 survey by the Federation of Finnish Commerce and Trade (KKL), it was concluded that the share of the hidden economy in trade is 1% to 5%.

The share of output attributed to concealed income is high in certain trade sectors (car sales, repairs, outdoor markets, etc.). Bypassing the cash desk is easy in such industries because most of the customers are private individuals.

Statistics Finland's Labour Force Survey defines employment levels in the national accounts. This survey, and through it employment in the national accounts, contains at least some hidden economy employment. A satisfactory employment level raises wage and salary levels above those found in the establishment register. Wage and salary levels can be perceived by multiplying the number of employed by their estimated yearly earnings or the estimated hours they work by the hourly rate of wages and salaries. If the operating surplus level is regarded as stable, raised wage and salary levels will increase value added and output.

The share of the hidden economy added to the national accounts estimates on trade and hotels and restaurants is 0.1% to 9%.

### *Intermediate consumption*

Intermediate consumption of trade is calculated by means of structural business statistics. Included in intermediate consumption are external services, leasing rents, other rents and other fixed and variable expenses. In repair and maintenance industries (Industries 502 and 527) and in hotels and restaurants (Industries 551 to 555) the calculation of intermediate consumption differs from other trade industries. In these two industries purchases consist mostly of other materials and supplies than merchandise, whereby they are included in intermediate consumption and not treated as deducted items of output. Increase in the change in inventories reduces the intermediate consumption.

Financial leasing has to be deducted from intermediate consumption calculated by means of structural business statistics data, as it must not be counted in intermediate consumption of trade. Data on financial leasing rents paid are available from the statistics on financial leasing only by main industry. Financial leasing rents to be deducted from intermediate consumption are divided to sub-industries of trade in relation to leasing rents of structural business statistics.

The second item deducted from intermediate consumption is computer software, part of whose acquisition costs are included in structural business statistics under the item 'software design and programming services'. In the estimates, 30% of this item is deductible from intermediate consumption. The share is estimated by comparing the total level of software investments with the data derived from the structural business statistics inquiry. In the

questionnaire enterprises are asked about investments in computer software as supplementary balance sheet data.

Data on capital losses on mergers and sales of fixed assets included in other expenses in the profit and loss account are to be found in the structural business statistics. These items are neither recorded in intermediate consumption.

Other expenses in the profit and loss account also comprise a number of other expense items, which are not treated as intermediate consumption in the national accounts. Such are part of benefits in kind, part of insurance premiums on property, real estate taxes and other taxes on production. An estimate is made of benefits in kind by comparing the wage and salary data in the Business Register and in the structural business statistics. Industry-specific data on other taxes on production are derived from centralised calculations. Data are available on insurance contributions on property and real estate taxes only on the level of the entire business sector. A rough estimate is made of the share of manufacturing by means of capital stock data.

### 3.14 Hotels and restaurants (H)

	NACE H	Output	IC	GVA	
1	Basis for NA figures	<b>4415</b>	<b>2756</b>	<b>1659</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>4415</b>	<b>2756</b>	<b>1659</b>	} Conceptual adjustment
4	Reallocations for national accounting	<b>544</b>	<b>257</b>	<b>287</b>	
	Reallocations for alignment with ESA 95	<b>544</b>	<b>257</b>	<b>287</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>544</b>	<b>257</b>	<b>287</b>	
5	National-accounting result (rounded)	<b>4959</b>	<b>3013</b>	<b>1946</b>	} Balancing
6	Macroeconomic reconciliation adjustment				
7	<b>Final NA estimate</b>	<b>4959</b>	<b>3013</b>	<b>1946</b>	

Calculations and sources for this industry are partly explained in Section 3.13 Trade.

#### 3.14.1. Designating the industry

Hotel and restaurant activities are divided into two sub-industries.

Industry 551, Hotels, includes the provision of lodgings for overnight stay by clients in return for payment. This category includes the following three-digit industries:

551 Hotels  
 552 Camping sites and other provision of short-term accommodation

Industry 553, Restaurants, includes prepared meals, the sale of other food servings and beverages and catering. It includes the corresponding three-digit industries:

553 Restaurants, café/restaurants and food kiosks  
 554 Coffee and beverage bars  
 555 Staff and institutional canteens and catering

### 3.14.2. Main data sources

The main data sources of national income estimates in the hotels and restaurants sector are those compiled by Statistics Finland: the Business Register, structural business statistics, the Labour Force Survey and different indices, including the index of wage and salary earnings and the consumer index.

### 3.14.3. Calculation methods

There are two key basic statistics available to compile final accounting figures in the hotels and restaurants sector: the Business Register and structural business statistics. Both are exhaustive statistics whose data are based on direct surveys sent to enterprises and establishments, and the tax administration's database.

### *Output and intermediate consumption*

Output at basic prices in the hotels and restaurants sector comprises market output and output for own final use (computer software).

The sources and methods of calculations are same as in trade except the calculation of output in the hotels and restaurants sector that starts with turnover. Changes in finished product inventories, production for own use and other output from business activities are added to turnover in accordance with **structural business statistics**.

The total value of the hidden economy is estimated according to the tax administration's auditing statistics and a special study. In 1996, this amounted to roughly 1.7–3.4 % of output in the industry.

Intermediate consumption of hotel and restaurant activities (a proportional share of output) is calculated by means of structural business statistics. It includes purchases of goods for resale, changes in inventories, external services, leasing rents (financial leasing is deducted) and other fixed and variable expenses.

## 3.15 Transport, storage and communication (I)

NACE I	Output	IC	GVA
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1	Basis for NA figures	<b>25811</b>	<b>16547</b>	<b>9264</b>	
2	Allowances and adjustments	<b>54</b>	<b>-11</b>	<b>65</b>	} Data valid.
3	Balance-sheet result	<b>25865</b>	<b>16536</b>	<b>9329</b>	
4	Reallocations for national accounting	<b>-2593</b>	<b>-7603</b>	<b>5010</b>	} Conceptual adjustment
	Reallocations for alignment with ESA 95	<b>-2593</b>	<b>-7603</b>	<b>5010</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>-2593</b>	<b>-7603</b>	<b>5010</b>	
5	National-accounting result (rounded)	<b>23272</b>	<b>8933</b>	<b>14339</b>	
6	Macroeconomic reconciliation adjustment	<b>55</b>	<b>73</b>	<b>-18</b>	} Balancing
7	<b>Final NA estimate</b>	<b>23327</b>	<b>9006</b>	<b>14321</b>	

Transport and communications as a part of GDP has grown mainly due to the rapid rise in data communications in the 1990s from just over 8% to above 9%. Its share of investment in the economy has varied yearly from 10% to 15%, while the share of those employed has remained stable at around 8%.

This chapter focuses on market output of transport and communications. Non-market producers of transport and communications are described in Section 3.15.4.

In this case, the production of transport activities and related services and of communications market output are the subject of review. The calculation also covers management companies and management establishments belonging to transport communications businesses, computer software production for own final use and the so-called hidden economy.

Transport activities that produce market commodities include the carriage of goods and passengers on land, on water and by air. Key market services related to transport are terminal, storage, cargo handling and parking services, and the brokerage of transport and travel. Postal, mailing and courier services and broadcast programme transmission services belong to telecommunications market producers.

Transport by private motor vehicles is not production of a market commodity. Transport organised by other industries is considered to be an ancillary activity of the producer industries concerned. Enterprises engaged in the maintenance and repair of vehicles for transport are treated in calculations as the purchase of services from suppliers in their own establishments.

General government units are units ancillary to transport engaged in the production of public services, but local authority harbours and transport services are treated as transport market producers, for example. Units producing other non-market output related to transport are treated with the description of general government and non-profit institutions in Sections 3.18 and 3.20.

The construction and maintenance of railways, roads and waterways and of telecommunications networks belong to construction activities.

The aggregate figures for transport and communications are shown in a table in the same form as the data collection framework, with data for output, wages and salaries and numbers of employed persons.

**Table 17: Aggregate calculations for transport and communications by industry**

<b>PRODUCTION, WAGES AND SALARIES AND EMPLOYMENT 2004</b>	Establish-ments	Output (EUR mil.)	Wages and salaries (EUR mil.)	Total employed	Employes	Self-employed persons
<b>I. Transport, storage and communications</b>	<b>28 427</b>	<b>23 282</b>	<b>4 257</b>	<b>172 050</b>	<b>149 250</b>	<b>22 800</b>
<b>IA. Transport and storage</b>	<b>26 907</b>	<b>16 192</b>	<b>3 067</b>	<b>127 570</b>	<b>105 080</b>	<b>22 490</b>
<b>60 Land transport; transport via pipelines</b>	<b>21 970</b>	<b>6 966</b>	<b>1 629</b>	<b>84 560</b>	<b>62 930</b>	<b>21 630</b>
<b>601 Rail transport</b>	<b>2</b>	<b>721</b>	<b>249</b>	<b>8 630</b>	<b>8 630</b>	
<b>602+603 Other land transport and transport via pipelines</b>	<b>21 968</b>	<b>6 245</b>	<b>1 380</b>	<b>75 930</b>	<b>54 300</b>	<b>21 630</b>
6021 Bus, tram and underground train transport	651					
6022 Taxi transport	8 899					
6024 Freight transport by road	12 417					
6030 Transport via pipelines	1					
<b>61 Water transport</b>	<b>519</b>	<b>1 779</b>	<b>367</b>	<b>10 660</b>	<b>10 490</b>	<b>170</b>
<b>62 Air transport</b>	<b>141</b>	<b>1 835</b>	<b>226</b>	<b>5 140</b>	<b>5 120</b>	<b>20</b>
<b>63 Supporting and auxiliary transport activities</b>	<b>4 277</b>	<b>5 612</b>	<b>845</b>	<b>27 210</b>	<b>26 540</b>	<b>670</b>
<b>6301 Railway development</b>	<b>1</b>	<b>431</b>	<b>5</b>	<b>100</b>	<b>100</b>	
<b>6302 Road development</b>	<b>3</b>	<b>1 347</b>	<b>38</b>	<b>1 400</b>	<b>1 400</b>	
<b>6303 Supporting air transport activities</b>	<b>130</b>	<b>315</b>	<b>114</b>	<b>3 240</b>	<b>3 240</b>	
<b>6309 Other supporting and auxiliary transport activities</b>	<b>4 143</b>	<b>3 519</b>	<b>688</b>	<b>22 470</b>	<b>21 800</b>	<b>670</b>
6310 Cargo handling and storage	547	744	241	7 150	7 060	90
6321 Supporting land transport activities	361	430	66	2 440	2 310	130
6322 Supporting water transport activities	128	461	93	3 440	3 400	40
6330 Activities of travel agencies	2 078	1 283	123	4 430	4 160	270
6340 Activities of other transport agencies	1 029	601	166	5 010	4 870	140
<b>IB. Post and telecommunications</b>	<b>1 520</b>	<b>7 090</b>	<b>1 190</b>	<b>44 480</b>	<b>44 170</b>	<b>310</b>
<b>641 Post and courier activities</b>	<b>416</b>	<b>1 403</b>	<b>525</b>	<b>23 420</b>	<b>23 130</b>	<b>290</b>
<b>642 Telecommunications</b>	<b>1 104</b>	<b>5 687</b>	<b>665</b>	<b>21 060</b>	<b>21 040</b>	<b>20</b>

### 3.15.1 Main data sources and calculation method

The basic framework for calculating market output, wage and salary levels and employment levels is formed annually on the basis of Statistics Finland's Business Register. The statistical unit denotes, but for certain exceptions, the establishment, and economic activities denote turnover, wages and salaries, and number of staff.

Because the Business Register does not cover any other relevant data from the standpoint of compiling production accounts, recourse is had to the cost structure data in Statistics Finland's structural business statistics for estimates of intermediate consumption, social security costs and gross fixed capital formation. The statistical units of structural business statistics are

enterprises engaged in the transport and communications industry and the examination focuses on purchases of materials, supplies and services, rents paid, staff costs and other costs as well as increases or decreases in the expenditure of fixed assets of enterprises and self-employed person households whose main occupation is transport and communications.

When the data collected from the registers have been updated, the data content is checked and any deficiencies are made good using supplemental sources and special reports. The database is supplemented with the management units of transport enterprises and public enterprise activities. Key management units consist of shipping companies engaged in maritime transport and their management establishments, certain head offices in the forwarding and loading sector and the group management of the national railways and post. Municipal public transport companies, municipal harbour authorities and unincorporated state enterprises responsible for shipping lanes, ferries and piloting belong to public enterprise activities.

When levels of variables in the register have been supplemented and adjusted, the annual growth is analysed. Among the supplemented and adjusted data most used are individual financial statements, business cost structures, business performance statistics, central government and local authority financial statistics and estimates and statistics compiled by interest groups and businesses.

Calculation items are controlled from the standpoint of the hidden economy on the basis of separate tax administration reports based on tax audits. The tax administration defines as belonging to the hidden economy concealed income of enterprises, undeclared earnings paid to employees and disguised dividends paid to themselves by self-employed owners. Hidden income reduces the recorded output of the industry – and hence the worth of value added reduces. Also components of value added skew up by payments of undeclared earnings and the omission of disguised dividends .

The transport industries' hidden economy is taken into account as a supplement added to output calculation items. Figures in payment control (MAVA) data for taxation turnover by which the new taxable value is calculated according to the tax administration's tax auditing statistics are used as monitoring material for making estimates.

Evidence of the hidden economy has been exposed mainly in relation to taxi and truck transport, in which there are a lot of self-employed owners and the use of casual workers is common. About 90% of all trucking enterprises and nearly all taxi enterprises are small enterprises owned by professional persons with less than 5 employees. Because truck and taxi enterprise tax audits are not conducted every year and their results may be inaccurate, we estimate the development of hidden economy not only by tax audits but also based on estimated hidden employment and contribution margin calculations which is multiplied by the vehicle stock .

Only exceptional instances of the hidden economy occur in industries with a predominance of business enterprises. On the basis of imputed taxable values, it is estimated that the hidden economy represents about 4% of output in the freight transport sector and just over 2% of output in the passenger transport sector.

### 3.15.2 Output calculation items

The tools for calculating annual changes in market output consist of Business Register turnover data and calculation items by establishment. The levels and contents are determined based on the typical distribution of output data derived from the financial statements of enterprises and other sources. The activated share of computer programmes produced for own final use in the gross formation of fixed assets is calculated as a separate item as well.

**Table 18: Output of transport by calculation item in 2004, EUR mil.**

<b>Transport, storage and communications</b>	
Output at basic prices	21 296
Output for own final use	12
Market output	21 284
Freight transport by land	5 023
Passenger transport by land	1 877
Freight transport by water	1 172
Passenger transport by water	596
Freight transport by air	146
Scheduled passenger transport by air	1 193
Non-scheduled passenger air transport	253
Other air transport activities	194
Cargo handling and storage	747
Ancillary land transport activities	489
Ancillary water transport activities	263
Ancillary air transport activities	360
Travel agencies	1283
Activities of other transport agencies	601
Letter and parcel delivery	935
Other postal services	126
Newspaper delivery	270.0
Other distribution and courier activities	73
Local telephone activities	674
Long distance telephone activities	40
International telephone activities	50
Mobile communications	2380
Data transmission	724
Program transmission	141
Other non-voice services	1674.1

In addition to passenger and freight transport, transportation also comprises other kinds of production. Calculation items for transport activities include not only transport by self-owned or third party owned vehicles, but also publicly purchased freight and passenger transport services paid by central government or local authorities, and other services related to transport activities, insofar as these services can be construed as occurring in the establishment of transport in question, such as sales to travellers on board boats or aircraft, independently operated services at stations or terminals, luggage storage and transfer, and the like.

Calculation items for supporting and auxiliary transport services include activities directed to both freight and passenger transport activities. Activities which properly serve freight transport consist of cargo handling and storage, transport terminals as part of ancillary land transport activities and forwarding and freighting as part of transport agencies. Activities

ancillary to passenger transport consist of land transport support activities related to bus stations and paid parking, airport activities and travel agencies. Activities ancillary to passenger and freight transport are included in other land transport services (towing services, land transport management establishments, etc.), in auxiliary water transport activities and in transport agencies (taxi call centres, haulage agencies, and the like).

Data communications comprises post and telecommunications. The postal service includes, besides letter and parcel transport, other related distribution activities and freight delivery and post office services, of which the most important are the provision of banking and insurance services. Distribution other than that related to postal distribution consists of a fairly even separation between newspaper delivery, direct advertising and the delivery of small parcels.

The rapid expansion, through the digitisation of networks, of data communications and new services whose share of production has within a few years outstripped that of traditional fixed network services, is typical of electronic data transfer. In order that accounting would better monitor changes in the service structure, telecommunications calculation items have included not only traditional fixed network services, but mobile and data network operations and the new types of service included in non-voice services.

### **3.15.2.1 Land transport**

Land transport comprises the following accounting industries: transport via railway, bus (including underground and tram transport), taxi, freight transport by road, and natural gas transport via pipeline. Construction, maintenance and repair of roads, underground routes and tram routes, and of pipe networks and vehicles is classified as belonging to separate industries under other headings.

About 80% of haulage in land transport (measured in tonnes) is by road and the rest is by railway. In ton kilometres, transport via railway amounts to one fourth of all passenger and freight transport. The high level of freight transport on railways is due to the fact that they are the principal form of freight transport of basic industries (the forestry, metal and chemical industries) characterised by heavy loads and long distances. Railway transport amounts to about 5% of all passenger transport.

In addition to its passenger and freight transport, the VR Group (formerly Finnish Railways) oversees two rail networks in private use, only one of which is in regular use, the line between Karhula and Sunila, owned by the timber processing industry.

The market output of railway transport is calculated mainly in accordance with the financial statement of the VR Ltd (the Finnish Railways Company), based on gross return on business activities. Output calculation items consist of passenger and freight transport and ancillary rail transport activities. They include freight and passenger transport on national and foreign-owned rolling stock and transport subsidies for goods and passengers paid by the State and other services belonging to rail transport. The levels of calculation items also include the activities of private stretches of railway. The activities of the VR Group belong to land transport ancillary activities.

Calculation items for scheduled and non-scheduled bus transport output consist of passenger and freight transport of private buses and bus, and rail and tram transport by municipal public traffic companies. Separate calculations are compiled for private bus transport and municipal transport activities. Output includes return on sales for transporting passengers on scheduled, contract and chartered transport, return on sales of post and freight transport and other returns related to the transport sector, such as renting vehicles and office space, sales to passengers on board buses and compensation earned for engaging in local and rural transport. Operations management is also calculated. Chartered bus transport covers those employed only for charters and the charters of those who have also scheduled transport.

Data on private bus transport are available from yearly statistics compiled by the Finnish Bus and Motorcoach Association (LAL) and Statistics Finland's structural business statistics for bus transport. Data on municipal transport activities is to be found in annual reports of traffic companies in Helsinki, Tampere and Turku and, if necessary, from separate surveys.

Taxi transport covers the transport of passengers and luggage in professionally operated vehicles. Roughly 9 000 vehicles are registered as taxis, of which around 3 000 operate in urban areas and the remainder in rural areas. Taxi station activities are treated as ancillary to land transport and the ordering of taxis as activity of transport agencies.

Freight transport by road comprises of scheduled and unscheduled haulage transport in for hire or reward registered trucks and vans. Transport in vehicles owned by enterprises is included in the industry of the enterprises in question.

In 2004, roughly 33,000 trucks and 3,300 vans were registered for professional use. The volume of trucks operating for hire or reward has for a long time been roughly half of the total truck stock. The transporting capacity of vehicles, by using heavier gross weights in articulated vehicles, has grown much faster than the rise in the number of vehicles supplying solely the individual needs of the enterprises owning them.

The typical self-employed person in the taxi and truck transport sector earns a living under a business name or as a self-employed person and gives employment to not more than four employees. Data in the Business Register cover only some of those so employed, based on the number of self-employed persons assessed in the Labour Force Survey. This may be because the Business Register does not accurately reflect the numbers, when it concerns a self-employed person without salaried staff or whose turnover remains below the threshold for the register. The problem is solved by the fact that for both taxis and trucking enterprises, data in accordance with the Business Register are approved at existing levels, but calculations for the self-employed are performed on the basis of data reported in the business income tax register. An effort is made to factor into projections the hidden economy share of transport. On the assumption that the missing self-employed activity parallels the growth of professional activities in the industry, data for the latter are recalculated by increasing the Business Register data of professionals in proportion to the number of professionals in the business income tax register.

The annual growth in the output of taxi transport is determined on the basis of the growth in turnover for taxi transport in the Business Register. The estimated value of profit from the hidden economy derived from taxi transport contributes to the level.

The level of output of freight transport by road is carried over with the changes in the share of turnover, adjusted for any change in the number of trucking enterprises and self-employed in the Business Register.

In Finland, transport by pipeline as a distribution industry separate from production processes consists only of the transfer of natural gas from the national border to the final user. From 2003, natural gas distribution companies have been obliged by law to distinguish sales and transmission of natural gas from other business activities in their bookkeeping. The share of pipeline transport of natural gas transmissions is calculated on the basis of the transmission activity. The output of pipeline transport is calculated as the size of the distribution margin by deducting the material purchases of the transmission activity from the output of the natural gas transmission activity. The activities of natural gas distribution companies and the manufacture and distribution of other substances (liquid oil products, city gas, etc.) belong to their proper industries.

### 3.15.2.2 *Water transport*

In Finland's national accounts water transport establishments are all vessels belonging to the Finnish merchant fleet registered by Finnish economic units in Finland and abroad or vessels time-chartered from abroad, which, contrary to the professional principles of the standard industrial classification for transport, also applies to vessels used for own-account transport, of which the most important are tankers belonging to Fortum Oy. Floating of logs includes establishments engaged independently in floating. Establishments of forest industry enterprises used for floating of logs are included in their own transport activity. The activity of time-chartered vessels registered abroad or from abroad is regarded as belonging to the production of Finland if the vessel is chartered either temporarily or permanently into the use of a Finnish economic unit.

The Finnish merchant fleet comprises vessels owned by Finnish shipping companies either fully or partly and vessels registered in Finland or abroad. The number of vessels entered in the Finnish register was 640 at the end of 2004. The number of vessels in foreign registers owned by Finnish shipping companies was 51 and Finnish shipping companies had in use 97 vessels time-chartered from abroad.

Road ferries, shipping lane and rescue vessels and icebreakers are not part of the Finnish merchant fleet. Of them road ferries in inland water transport and car ferries in archipelago transport are included in water transport. In other respects the activity of these vessels belongs as part of piloting and shipping lane services to supporting water transport activities.

Water transport output includes not only output from ordinary freight and passenger transport, but also all output earned on Finnish vessels, such as sales to passengers, other passenger service output and vehicle transport on board. In addition, the activities of vessels chartered by a Finnish unit for use abroad over a given period are treated as domestic production.

Output for international seaborne transport is calculated separately for passengers and freight on the basis of freight revenues according to Statistics Finland's gross freight statistics. Output for freight transport consists of revenues from liner trade, tramp traffic and time charter contracts. The freight revenues from vessels chartered in foreign countries are calculated in gross terms and compensation paid is treated as intermediate consumption under purchase of services from abroad.

Output of passenger transport comprises output arising not only from ticketed and cruise travel sales, but also sales from restaurants and shops on board. The output of shops, in accordance with the concept of trade output, amounts to the trade margin. In other words, the value of the bought goods is deducted from the sales. The data source is structural business statistics for water transport.

Calculation items for coastal and inland water transport consist of tanker transport, floating of logs, and other freight transport and domestic passenger transport. The freight transport mainly in coastal waters between Fortum Oy's refineries is included in foreign sea tanker transport. The level of tanker transport is determined mainly on the basis of the financial statement data of Fortum Oy's shipping activities. Floating of logs covers the river transport of logs by the National Board of Forestry and local log floating associations. Because the output from floating of logs cannot be measured in terms of services sold on the market, it is calculated by multiplying the transported wood (1 000 m<sup>3</sup>) (measured in tonnes per kilometre) by transport unit cost (€/m<sup>3</sup>). In other respects, calculations are made from the structural business statistics based on data derived from the business income tax statistics.

### **3.15.2.3 Air transport**

Air transport covers transport activities of Finnish airlines in scheduled and non-scheduled flight activities and commercial pilots. The output of air transport is calculated not only on the transport itself, but on the leasing of aircraft and other support services produced. Sales to travellers on board and sales of goods and services to other airline companies are included in catering services, while repair and maintenance of aircraft is treated as manufacturing. The level of air transport activities is determined primarily on the basis of flight activity data from the Finnair Group. It is supplemented in relation to turnover data in the Business Register so as to incorporate charter and contracted flights by light aircraft as a source of earnings.

### **3.15.2.4 Supporting and auxiliary transport activities; travel agencies**

Supporting and auxiliary transport activities consist of cargo handling and storage, other activities ancillary to land transport, activities ancillary to water and to air transport, travel agencies and miscellaneous activities ancillary to tourism, and other transport agencies.

Cargo handling and storage comprises stevedoring and other cargo handling as well as professionally handled warehousing. Cargo handling and storage separately organised by enterprises is calculated as part of their ordinary business activities.

Activities ancillary to land transport comprise operations supplied by independent establishments serving land transport, such as management, haulage, terminal, towing, and parking services. Terminal services at bus stations include only ticket and freight services by bus transport and other ancillary activities directly serving scheduled bus transport. Restaurant and kiosk sales at bus stations are counted as retail trade and restaurant activity. Supporting transport and terminal activities performed in passing by railways, cargo handling and trucking are counted as part of their principal operation. Public parking comes under other non-market producers and paid parking that serves activities proper to enterprises is treated as part of their ordinary activities.

Activities ancillary to water transport comprise those serving navigation activities, vessel rescue services, ports and icebreakers and other water transport services. Among them, local authority ports and parts of other activities ancillary to water transport based on data in the Business Register come under market producers. The manufacture, maintenance and repair of harbour areas and harbour buildings are counted as construction activity and the operation of industrial ports is treated as part of ordinary business activities. The remaining production of the industry is other non-market production.

Activities ancillary to air transport comprise airports and airfields belonging to the Civil Aviation Administration, the air navigation and flight safety system and other support activities for air transport. The activities also cover aviation management. The manufacture, maintenance and repair of airports and buildings are counted as construction activity. Restaurant and kiosk sales at airports are counted as retail trade and restaurant activity.

Calculation of tour operators and other tourist assistance activities cover the production of package, charter and group tours by tour operators, planning all-in tours and ticket sales and other tourism related ordering and mediation services, such as arranging accommodation.

Forwarding and freighting and the activities of taxi call and freight transport booking centres are counted as belonging to activities of other transport agencies.

The output of supporting and auxiliary transport activities is calculated on a net basis so that it corresponds as nearly as possible in structure and content to each service produced (loading and harbour services, storage and terminal services, arranging of travel and transport handling, etc.). Purchases related to handling services (loading, transport and accommodation services, etc.) and goods for resale are deducted from gross sales as adjusting items. The exceptions are tour operators in which purchases of transport, accommodation and guide services needed for own-account production are included to the full amount in the product. For all-in tours supplied and ticket handling, this only applies to the amount of the commission.

### **3.15.2.5 Post and courier activities**

The industry covers post services and mailing, distribution and courier services performed by parties other than the national postal service. Calculation items in post and courier activities consist of letter and parcel

transport, printed matter transport, other postal services and other distribution and courier services.

Output of letter and parcel delivery by post and courier activities and newspaper delivery is part of the delivery service of Finland Post and of other companies. Output from other postal activities comprises mainly post office services and the output of distribution and courier activities of other enterprises mainly from sales arising from direct marketing and the limited distribution of goods.

### 3.15.2.6 *Telecommunications*

It was typical of the Finnish telecommunications market before 1995 that, besides the basic service and mobile network services offered by the nation-wide State telecommunications company, there were many local telephone companies in the country who obtained operating permits to engage in local network activities alone. Deregulation of the telecommunications market made long-distance call handling possible. Private regional companies established the Finnet network in addition to the existing Sonera network. Through it, the local networks of regional telephone companies act as service operators linked to the national long-distance network. In 2000 a group of local operators separated from the Finnet group, and set up the Elisa Group, which started national network operations as the third service operator in Finland. As a result of competition, a group of new, independent telecom operators, focusing mainly on GSM telephones, entered the market. One of them, Telia Oy, a service operator, was combined in 2002 as part of the TeliaSonera Group's Finnish operations when Sonera merged with the Telia Group.

The deregulation of the telecommunications market and the rapid extension of the transfer network created a new competitive arena in which the actors are the new network operators (basic and line network services) and the service operators and resellers of telecommunications services who purchase network services from the former. The latter may operate as producers of services in other industry groups as well. The extension of competition to cover all telecommunications services along with the evolution of information technology led to telecommunications becoming one of the fastest growing industries in Finland's national economy since 1995.

In order that calculations will correspond as closely as possible to the new situation from the standpoint of metering traffic volume, telecommunications accounting items were redefined in a way that they would now cover not only the traditional fixed network local, long-distance and international, but mobile and data network transmissions and new kinds of telecommunications services, non-voice services included. The levels and content of calculation items for local, long-distance and international calls, mobile communications and data transfer were specified to comply with the new market situation in accordance with the distribution of turnover by product group of enterprises in the telecommunications statistics of the Ministry of Transport and Communications. The level and annual growth in the programme transmission service were specified on the basis of turnover in the Business Register for establishments in the corresponding industry.

Among non-voice services counted in telecommunications are Internet services, purchases of network services among telecom operators, telecom company activity related to the installation and repair of equipment and sales and leasing for the use of customers. The size of the calculation item for non-voice services is defined on the basis of turnover from other telecom activities by deducting from it the network services between telecom operators and the purchase of goods for resale. Because the calculation item includes most new services in telecommunications, its growth together with mobile telephone activities has been faster than other activities.

### 3.15.3 Intermediate consumption calculation items

Intermediate consumption of transport is calculated by subindustry, based on the cost structure of the enterprises' structural business statistics. In structural business statistics, as the enterprise – not the establishment – is the statistical unit, intermediate consumption corresponding to the production of enterprises is adjusted to match the intermediate consumption level of the production of the establishments in proportion to the output levels calculated for the latter.

**Table 19: Calculation items in intermediate consumption of transport by main industry 2004, EUR mil.**

Calculation items	I.	60	61	62	63	641	642
	Transport & storage	Land transport	Water transport	Air transport	Activities ancillary to transport	Postal transport	Telecommunications
Materials & supplies	2 028	1 165	246	352	265	15	539
Rents	687	92	277	143	175	46	266
External services	2 348	661	298	358	1 031	146	820
Misc. operating expenses	850	288	70	179	313	131	360
<b>Int. consumpt. at purch. prices</b>	<b>5 913</b>	<b>2 206</b>	<b>891</b>	<b>1 032</b>	<b>1 784</b>	<b>338</b>	<b>1 985</b>

Purchases in accordance with the structural business statistics of an enterprise made during the accounting period +/- changes in inventories are used as a means of estimating the intermediate consumption of materials and supplies. As such, purchases include all goods purchased that are declared for tax purposes, current assets and non-activated acquisitions related to fixed capital. Since only the energy used (fuels and lubricants, electric power) and spare parts and other maintenance materials and supplies (tyres, accessories) are counted as part of the materials and supplies of an enterprise, the purchases level is revised by deducting from them any purchases of goods for resale with the exception of acquisitions of operating supplies.

The calculation item "Rents" covers rents for machinery and equipment, property and office space, including operating leasing payments. Calculation items are determined on the basis of leasing and other rental expenses in structural business statistics by deducting financial leasing as an adjusting item belonging to gross fixed capital formation.

The external services calculation item mostly comprises repair and maintenance of machinery and equipment, remuneration and commissions for subcontractors and transport agents, and real estate, data handling and telecommunications services. Changes in calculation items are estimated based on purchases of external services in structural business statistics by consolidating the mutual transactions of the establishment (freight, network services and the like) as output revision items and adding own-account repairs and maintenance of equipment.

The calculation item "Other operating costs" comprises expenditure on other transport management related costs in structural business statistics that are imputed to be included in other expenditure, such as insurance, management and operating licences, inspections and typical management and other operating costs common to various forms of transport. Accounting related to insurance and transport is performed based on the accrual of payments. The value added of taxes on transport management is deducted from transportation charges as belonging to taxes on production. The share of administration and other business costs in other operating costs of structural business statistics are calculated for the different industries as typically estimated parts of turnover.

### *3.15.4 Non-market producers*

#### *3.15.4.1 Central government*

Central government production occurs in the following transport subindustries: Railway development (6301), Road development (6302) and Other supporting transport activities (6309).

The calculation methods are the same as those in other central government industries. Data sources for central government production and projections are described in Section 3.18.1. and road development in Section 3.12.2.3.

#### *3.15.4.2 Local government, road development industry (6302)*

The production of joint municipal authorities in general and their data sources are described in Section 3.18.2. The special features of the road maintenance industry are described here.

In national accounting, the task of joint municipal authorities transport activities is considered to be maintenance of, and new investment in, roads and streets: the road maintenance activities of joint municipal authorities are seen as a demand industry for which goods and services related to the maintenance of roads and streets are produced as market products in the civil engineering industry. Only investments are thus recorded in the road maintenance industry of joint municipal authorities.

The wear on roads and streets constructed and maintained by local government is recorded as this industry's consumption of fixed capital.

When local government production is calculated by expenditure, consumption of fixed capital is recorded as value added, output and consumption expenditure.

The sources used for investments are financial statistics of municipalities and joint municipal boards (Part II, Table 02) function category Traffic

routes (460) and the financial statement data of the Government of Åland. Physical depreciation is obtained from the capital stock model.

### 3.15.4.3 Non-profit institutions serving households, road development (6302)

Non-profit activities are explained in Section 3.20.4.

Private roads maintained by road associations belong to non-profit activities in the road development industry. The output of the industry comprises intermediate consumption and consumption of fixed assets. No wages and salaries are earned in the industry. Road maintenance occurs mainly as purchases of services and as such is intermediate consumption. Projections of intermediate consumption are based on central and local government grants for private roads and financing collected by road associations from members. Central and local government grants for road maintenance are based on central and local government budgetary data and private financing of roads is based on estimates by the Finnish Road Association.

Consumption of fixed capital is obtained from the capital stock model.

## 3.16 Insurance and financial intermediation (J)

	NACE J	Output	IC	GVA	
1	Basis for NA figures	<b>3051</b>	<b>2947</b>		} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>3051</b>	<b>2947</b>		} Conceptual adjustment
	Reallocations for alignment with ESA 79				
	Reallocations for alignment with ESA 95	<b>3204</b>	<b>7</b>	<b>3301</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>3204</b>	<b>7</b>	<b>3301</b>	} Balancing
5	National-accounting result (rounded)	<b>6255</b>	<b>2954</b>	<b>3301</b>	
6	Macroeconomic reconciliation adjustment	<b>97</b>	<b>1</b>	<b>96</b>	
7	<b>Final NA estimate</b>	<b>6352</b>	<b>2955</b>	<b>3397</b>	

### 3.16.1 Financial intermediation (65)

The industry is divided into several parts. In addition to the central bank and credit institutions it comprises other monetary financial institutions and activities auxiliary to financial intermediation and insurance. Credit institutions are divided into deposit banks, money market funds and other monetary financial institutions practising financial intermediation.

### 3.16.1.1 *Main data sources*

The Bank of Finland's financial statements and any supplementary breakdowns of various income and expenditure items, preliminary figures being available in January and official data in spring after the publication of the financial statement. Statistics Finland has available the data on the banking activity as the supervision officials of the Financial Supervision Authority. For some financial institutions, it is necessary to rely on further inquiries if such funds are not part of conventional banking practice. Statistics Finland's statistics on banks are available for commercial banks, co-operative banks, savings banks and other credit institutions (financing companies, mortgage credit institutions and credit companies) and property management companies (Arsenal).

### 3.16.1.2 *Calculation method*

Output is divided into three components. (1) Market output consists of various fees charged by banks, either fixed rates or *ad valorem* type payments and certain other items (incl. income from securities trading and currency transactions, income from rent and other components). (2) Financial intermediation services indirectly measured (FISIM) comprise the banks' interest margin generated from the difference between borrowing and lending. The central bank does not produce financial intermediation services indirectly measured and its output is calculated through costs. (3) Output for own use is the smallest of the output items. It includes software investments.

Intermediate consumption is calculated by specifying costs on business operations. The sources used are the same data as in calculating output. Intermediate consumption includes other administrative costs (= administrative costs incl. wages and non-wage labour costs), commission costs, real estate costs and estimate of rents of real estate in own use.

### 3.16.2 *Financial intermediation services indirectly measured (FISIM)*

FISIM (Financial Intermediation Services Indirectly Measured) refer to those services produced by financial corporations from which no direct fee is charged. FISIM is divided into user sectors, in which case intermediate consumption in each industry grows in direct relation to the use of financial intermediation services indirectly measured. FISIM included in interests on households' consumer credits and in interests on households' bank deposits are allocated to households' consumption expenditure, or final consumption.

The value of FISIM is calculated by using a reference rate that is the average rate of loans and deposits between FISIM producers, or credit institutions. The reference rate is applied to sector-specific interest flow and stock data that are obtained from credit institutions. Inside sectors FISIM is divided to the user industries on the basis of the total output of the industry. An external reference rate is used in calculating FISIM exports and imports, which is the average rate of loans and deposits between domestic and foreign credit institutions. The central bank does not produce FISIM but its output is calculated through costs.

**Table 20. Key items in the production account of financial intermediation, 2004.**

Output total	3720
- Market output	1530
- Output for own final use	70
- FISIM	2120

### 3.16.3. Insurance, excluding statutory social contributions (66)

Insurance is an activity in which the insurer carries the risk on behalf of the insured in exchange for a premium. The types of insurance are life assurance, individual and group insurance and non-life insurance.

Coming within the definition in Finland are life and non-life insurance companies, insurance associations, non-statutory pension funds and pension foundations, and smaller insurance units: the Finnish Motor Insurers' Centre, the Finnish Patient Insurance Centre and the Finnish Pharmaceutical Insurance Pool. Pension insurance companies, pension funds and pension foundations offering statutory retirement pension insurance are part of the statutory employee pension system and are not part of insurance activities in Finland.

#### 3.16.3.1 Main data sources

Insurance activities in Finland are controlled by the Insurance Supervision Authority, which comes under the responsibility of the Ministry of Social Affairs and Health. The Insurance Supervision Authority publishes comprehensive statistics on insurance companies (in the Official Statistics of Finland Series) at the end of the year and covers most of insurance companies and insurance. The Insurance Supervision Authority also collects data on pension funds and foundations. These are the most important data sources used in the calculation of insurance companies.

In the preliminary round available are the collected data and preliminary figures of the Federation of Finnish Insurance Companies. This material covers Finnish insurance companies but not insurance associations and foreign insurance companies operating in Finland.

#### 3.16.3.2 Calculation method

In calculating the insurance production account, use is made of the profit and loss account data, balance sheets, and related data and breakdowns. The first part of the insurance companies profit and loss account data, the so-called insurance technical account, differs widely from regular profit and loss accounts and contains huge transfer items. These transfer items are based on future holdings.

In recent years, the expanding product range offered by life insurance companies has caused insurance savings to rise sharply resulting in a faster growth in income from life insurance premiums than from non-life insurance premiums. Life insurance output at current prices has remained low

(yielding negative values at times) because premium liability grows in proportion to premium income.

## Output

The output of insurance companies is calculated from premium output, premium expenses, operating costs and property income of policyholders. Premiums written and change in provision for unearned premiums included in premium output and claims paid and change in the provision for outstanding claims included in premium expenses are obtained directly from the insurance technical account. The figures include reinsurance.

Handling of holding gains and losses in calculating the output of insurance was improved by estimating the impact of realised holding on the change in technical reserves of life insurance in the following way:

Insurance companies should transfer (the biggest) part of realised holding gains, i.e. net sales proceeds, to policyholders if these holding gains have been earned by investing premium income. In the financial statement this transfer is included in the change in provision for unearned premiums and in the balance sheet the provision for unearned premiums has the same value.

In the ESA95 equation for output of insurance the change in provision for unearned premiums is given as a negative item. According to ESA95 all holding gains, such as net sales profits, must be subtracted from the output. In order to do so it must be evaluated what is the proportion of holding gains in change of provision for unearned premiums and then remove it from the item in question before calculating the output.

The profit and loss account includes unrealised holding gains for linked life insurance, or increases in value. Increases in value have a full effect on change in provision for unearned premiums, so unrealised holding gains can be in full subtracted from provision for unearned premiums while realised holding gains can be subtracted only partially. The data supplied by the Insurance Supervisory Authority ISA give realised gains only on total level (sales profits – losses) but no direct information is available on the share transferred to policyholders. Part of the realised holding gains belongs to insurance companies.

The new method for evaluating the share transferred to the policyholder starts from that first the share of net sales profits transferred to policyholders is calculated first by multiplying net sales profits by the ratio:

(insurance technical reserves / (insurance technical reserves + balance sheet equity)).

From the net sales profits the share of non-participating (not entitling to bonus) insurance is removed. This share is estimated on the basis of the premium income by insurance type available from the statistics on insurance corporations. In Finland the share of such non-participating insurance is small, so it does not have a large effect. After the two stages mentioned above the remaining amount of the realised holding gains is subtracted from the change in technical reserves when calculating the output of insurance.

One must keep in mind that the used multiplier (equity / (equity + technical reserves)) is only an estimate. In fact insurance companies have to transfer

only the sales proceeds connected to linked life insurance to change in provision for unearned premiums. We do not have sufficient data to know exactly how much of the realised holding gains in real life are transferred to change in provision for unearned premiums. Insurance companies have a right to decide how much bonus they pay to policyholders who do not have linked life insurance. Insurance companies are not obliged to give this information.

Paid claims and investment costs in the insurance technical account include management expenses mainly consisting of wages and salaries, for which reason they do not decrease output. For this reason, the claims management expenses and investment operating expenses found in the specification of operating costs are added to adjust output.

Insurance output projection table (projections for all lines of insurance, in 2004):

Intermediate consumption	837
Value added, gross	794
	<b>EUR mil.</b>
Premiums written (+)	5 927
Change in provision for unearned premiums (-)	1 040
Claims paid (-)	4 304
Claims management expenses (+)	202
Change in provision for outstanding claims (-)	378
Equalization amounts change (-)	178
Investment income, net (+)	1 932
Investment expenses (-)	521
Investment operating expenses (+)	53
Income from investment of own funds (-)	109
<b>Output (market), total</b>	<b>1 584</b>
<b>Production for own use</b>	<b>47</b>

### *Intermediate consumption*

Intermediate consumption is obtained by deducting wages and salaries and employers' social contributions from overall operating costs. The net value of reinsurance services, or the reinsurance share of premiums paid, paid claims and premium and indemnity liability adjustments are added to intermediate consumption. The size of reinsurance is the same in both output and intermediate consumption and has no net influence on value added.

### **3.16.4 Activities auxiliary to financial intermediation and insurance (67)**

The industry comprises a heterogeneous group of businesses assisting financial and insurance corporations. The industry is split into two groups: activities auxiliary to financial intermediation, except insurance and pension funding (67.1) and activities auxiliary to insurance and pension funding (67.2).

67.11 Administration of financial markets includes the stock exchange for whose activities a profit and loss account and balance sheet are available.

67.12 Security brokering and fund management. Includes brokerage institutions for which profit and loss statements are available.

67.13 Activities auxiliary to financial intermediation n.e.c. Includes intermediation of credit, financial and investment advice and businesses

specialised in currency transfers. Profit and loss statements are available on request.

67.2 Activities auxiliary to insurance and pension funding. Includes the activities of businesses supplying insurance, insurance brokers, etc.

### 3.16.4.1 Main data sources

The main data sources are Statistics Finland's Investment company statistics, which include asset management and stockbroker firms. Other important sources are Statistics Finland's Mutual fund statistics and the Insurance Supervision Authority's statistics on Insurance Brokers.

Financial statements data are used for currency exchanges and other units.

### 3.16.4.2 Calculation method

The output of the industry comprises mainly various kinds of commissions and fees. The output for own final use is computer software and it is obtained from centralised accounting.

Intermediate consumption is based on the separation of various business expenses which are to be found in the financial statement.

## 3.17 Real estate, renting and business activities (K)

	NACE K	Output	IC	GVA	
1	Basis for NA figures	<b>39556</b>	<b>15461</b>	<b>24095</b>	} Data valid.
2	Allowances and adjustments	<b>-12</b>	<b>-97</b>	<b>85</b>	
3	Balance-sheet result	<b>39544</b>	<b>15364</b>	<b>24180</b>	
4	Reallocations for national accounting	<b>211</b>	<b>484</b>	<b>-273</b>	} Balancing
	Reallocations for alignment with ESA 95	<b>211</b>	<b>484</b>	<b>-273</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>211</b>	<b>484</b>	<b>-273</b>	
5	National-accounting result (rounded)	<b>39755</b>	<b>15848</b>	<b>23907</b>	
6	Macroeconomic reconciliation adjustment	<b>51</b>	<b>-2</b>	<b>53</b>	
7	<b>Final NA estimate</b>	<b>39806</b>	<b>15846</b>	<b>23960</b>	

### 3.17.1 Real estate activities with own property (701)

The industry consists of the TOL2002 categories: Development and selling of real estate (7011) and Buying and selling of own real estate (7012). Roughly speaking, the former comprises all kinds of activities relating to

building construction from the acquisition of land and the design of buildings to marketing and sales and excludes only actual construction itself. Buying and selling of own real estate is mostly real estate investment, or the purchase of buildings and real estate to be leased or sold.

In conjunction with the reform of supply and use tables, the industry's output was divided into principal and secondary production. Only principal production is reflected in figures for Industry 701. Secondary production, consisting of central and local government 'Real estate development', is included in the production of other industries in the sectors in question. Consequently, there is no secondary production recorded in the industry's production.

Principal production consists of the production of industry enterprises. The main sources for principal production are Statistics Finland's Business Register, the Structural Business Statistics and the Labour Force Survey. Calculating output from the real estate development is based on estimates for new construction of buildings and renovation. The output from buying and selling owned real estate is calculated using the total turnover of enterprises in the industry. Intermediate consumption is calculated as a uniform share of output. FISIM for the industry is taken from centralised calculations.

Municipal financial statistics are the source for the secondary production of the industry from the standpoint of local government. The level of production of central government 'Real estate development' is to be found in the defence administration's construction utility data.

### *Production by sector*

#### *S111 Non-financial corporations*

#### *Output*

Output from the **development and selling of real estate (TOL 7011)** is calculated in two parts. Output from new construction is obtained from the difference between pre-tax investment prices and production at producer prices in Statistics Finland's construction of buildings statistics. The developer's costs consist of design fees, financing, insurance premiums and connection fees. The costs vary depending on the building's purpose of use category. Depending on production weighting, developer costs varied between 14.3% and 12.5% for residential construction and between 15.4% and 13.9% for non-residential construction in the years 1995-2004.

Developer costs related to renovation work are calculated from renovation values in the construction of buildings industry at producer prices, to which is added the cost to the developer. This cost is presumed to be half as much for renovations as it is for new construction.

Output from **development of real estate (TOL 7012)** at basic prices is equal to the combined turnover of the establishment file in the Business Register. Enterprises of this industry have been in the Business Register since 1993.

*Intermediate consumption*

The intermediate consumption share of output is estimated for both industries on the basis of structural building statistics and the Business Register. The same share of intermediate consumption is applied to both industries (7011, 7012). The intermediate consumption share of the enterprise sector is also applied to secondary production.

*S1311 General government**Output*

General government production in Industry 701 consists of development and selling real estate (TOL 7011). Production consists of secondary production of other local government industries; hence, it is not included in figures for Industry "701 Real estate activities with own property".

General government development and selling of real estate consists of development by the defence administration's construction utility. The data are to be found in general government commercial accounts.

*Intermediate consumption*

The proportion of general government intermediate consumption is applied in proportion to the intermediate consumption/output of industries in the industry.

*S1313 Local government**Output*

Local government production in Industry 701 is likewise development and selling of real estate (TOL 7011). The production is local government secondary production of other industries and so it is not included in figures for Industry 701 "Real estate activities with own property."

Output calculations determine construction of buildings by local government, i.e. municipalities and joint municipal authorities. The development level is obtained as a share of the investment price of the construction of buildings – calculated from the financial statistics of municipalities and joint municipal authorities – and the cost to developers, to be found in building construction statistics.

*Intermediate consumption*

The proportion of local government intermediate consumption is applied in proportion to the intermediate consumption/output of industries in the industry.

**Table 21. Output, intermediate consumption and value added of Industry 701 "Real estate activities with own property" in 2004, EUR million**

	P1	P11	P12	P2	B1G
<b>Non-financial corporations</b>	1 322	1 322	0	910	412
<b>TOL 7011</b>	1 097	1 097	0	758	339
<b>TOL 7012</b>	225	225	0	152	73
<b>General</b>	13	0	13	9	4

<b>government</b>					
<b>Local government</b>	137	0	137	93	44
<b>Total</b>	1 472	1 322	150	1 012	460

### 3.17.2 Letting and operation of dwellings (7021)

The share of owner-occupied dwellings in Finland is high compared to the average of the Member States. In 2004, owner-occupied dwellings amounted to roughly 71% of the floor area of all dwellings.

The letting and operating of dwellings industry (7021) comprises the ownership, management and letting of dwellings, residential buildings and residential property companies. Industry output consists of real or imputed rents for dwellings and holiday homes. The main data sources used for calculation purposes are Statistics Finland's rent statistics, housing stock statistics and the Household Budget Survey.

Rent statistics show rent levels for the entire rental housing stock (including water supply charges and additional heating charges for individual dwellings). They also show the changes in rent levels from the previous year. Rent statistics are compiled annually from inquiries and register surveys in context with the Labour Force Survey. In 2005, the rent statistics sample framework contained 749 895 dwellings, for example, the data on 187 000 of which were to be found in the Social Insurance Institution's housing allowance register. Estimated rents for the remaining about 560 000 dwellings are based on around 15 500 interviews.

Housing stock statistics reflect the country's aggregate building stock in categories according to purpose of use. Dwellings are classified in statistics according to type of house, year of completion or refurbishment, size and type of dwelling, tenure status, equipment and equipment level, occupancy rate and location. Housing stock statistics are produced each year from data about construction and dwellings maintained by the Population Register Centre.

In conjunction with the reform of supply and use tables, the production of the industry was divided into principal production and secondary production. Only principal production is reflected in figures for Industry 7021 'Letting and operating of dwellings' in production for sectors S12 Financial and insurance corporations, S1311 General government and S1313 Local government, i.e. dwelling rents are reflected as secondary production. Secondary production in the above mentioned sectors is included in the production of other industries and, hence, is not recorded separately in the production of Industry 7021 'Letting and operation of dwellings'. FISIM for the industry is taken from centralised calculations.

#### 3.17.2.1 General calculation method

Industry output consists of real and imputed rents of dwellings and holiday homes. Real rents are those of dwellings that are let (excluding holiday homes). Imputed rents of owner-occupied dwellings are evaluated by means of market rents for equivalent rented dwellings. A classification method based on real rents, called the stratification method, is used to calculate

dwelling output. The real and imputed rents of holiday homes are based on housing costs calculated by means of data in the Household Budget Survey.

Intermediate consumption of dwellings (excluding holiday homes) is calculated by means of cost items per square metre and the dwelling stock's floor area data to be found in the financial statements of housing corporations. Intermediate consumption of holiday homes is calculated by means of data in the Household Budget Survey.

### 3.17.2.2 Calculation by economic activity

*Output: dwellings (excluding holiday homes)*

#### **Stratification classification**

The gross rents of dwellings were calculated in the base year using a classification method as the product of the stock and rents per square metre. The housing stock and rents are classified according to the following variables:

1. House type: detached small house (single-family house), attached houses and blocks of flats (includes housing type "Other housing").
2. Tenure status: owner-occupied dwelling, commercially financed rental dwelling, State-subsidised (includes other tenure status, such as company-owned and right-of-occupancy dwellings)
3. Region, according to house type.

- \* Detached small houses, attached houses
  - \* Metropolitan area
  - \* Growth centres
  - \* Other large centres
  - \* Other municipalities in accordance with NUTS 2 distribution for under 20 000 residents and for municipalities of 20 000 – 60 000 residents

4. Number of dwelling rooms, according to house type

- \* Detached small houses, attached houses
  - \* 3 rooms or more

- \* Blocks of flats

- \* 1, 2, 3 rooms or more

Only one price per square metre is used for Åland dwelling stock. The data are supplied by the Åland Office for Statistics and Analysis (Ålands statistik- och utredningsbyrå).

As far as blocks of flats are concerned, price data are obtained according to the number of rooms per dwelling and region, divided into State-subsidised rental dwellings and Other rental dwellings. For owner-occupied apartments in blocks of flats, rents of Other rental dwellings are used. The stock data are to be found in the dwelling stock register, divided so as to correspond to price categories.

The concept of rent in rent statistics includes separately payable water supply and heating charges. It does not include possible user charges related to occupancy, such as charges for the use of a sauna, laundrette, etc. and

electricity and telephone. In practice, rents for detached small houses include only partial heating costs. It is assumed when calculating that detached small house rents do not include heating costs. Gross rents for owner-occupied dwellings are exclusively own-account use output. Gross rents of rental dwellings are market output.

**Table 22: Floor area and gross income (output) of dwellings in 2004.**

Tenure status	Floor area 1000 sq. m.	%	Gross rent, EUR million	%
Total	188 454	100.0	16 633	100.0
Rented dwellings	48 416	25.7	4 843	29.1
Owner-occupied dwellings	140 038	74.3	11 790	70.9

**Table 23. Output, intermediate consumption and value added Letting and operation of dwellings in 2004, EUR million**

	P1	P11	P12	P2	B1G
Principal production	16 983	4 730	12 253	5 679	11 304
Non-financial corporations	898	898		316	582
Housing corporations	1 347	1 347		524	823
Employment pension institutions	8	8		3	5
Households	14 397	2 144	12 253	4 726	9 671
Non-profit institutions serving households	333	333		110	223
Secondary production	232	232		77	145
Central government	24	24		8	16
Municipalities	208	208		69	139
Total	17 215	4 962	12 253	5 756	11 449

Change in the quality of output is estimated by means of changes in value and prices. In 2004, for example, the value of the industry's output (P1) at current prices increased according to stratification calculations by 3.7% and prices by 1.9%. The annual change in volume as a residual of changes in value and prices was 1.7%, of which the annual change in the floor area of the dwelling stock covered 1.5% – the remaining 0.2% was considered to be variation in quality.

As a basis for estimating variation in the quality of output, use can be made of the fact that the annual increase in rents from rent statistics used for the change in price is meant to illustrate price changes for rental dwellings that are as alike as possible. Hence, no variation in quality is reflected in the change in price. Furthermore, even if the variation in quality determined by the residual method is not the most stylish possible solution, an estimate based on equipment levels and insufficient data on renovation, for example, would not unequivocally yield a more exact estimate. An effort will be made, however, to resolve this aspect of variation in quality within the restrictions of an urgent timetable.

The garage services' can be estimated with the help of the Statistics on the Finances of Housing Corporations, which covers attached houses and block

of flats. Sampling frame includes housing companies with a minimum area of 700 square metres. For year 2006 the questionnaire was sent to 2,393 housing companies, which accounts for 6.2 per cent of the number of the housing companies in the sampling frame. In all, 61 per cent of sample were included in the statistics.

For year 2006 fees for garages and other parking places were 4 cents per square metre in a month. In a year this amounts to 45 million euro. For households that live in their own dwellings the garage fees were 24 million euro. In all, different kind of fees (garages, business areas, ...) were 16 cents per square metre in year 2006 meaning that income from various fees were around 180 million euro. These are not included in the official figures at the moment but are going to be part of the dwelling services in the revised numbers.

In the case of the detached houses, which cover around 55 per cent of the square metres of the Finnish housing stock and are mainly used by the owners of the dwellings, the 'garage services' can be assessed using the information from the Statistics on the Finances of Housing Corporations as a guide. This gives an estimate of around 50 million euro in year 2006. This figure is already included in the official figures of housing services.

As a whole, income from garages and other parking places were estimated to be less than 100 million euro in year 2006. That is less than 0.6 per cent of the total housing services in Finland.

### *Output: holiday homes*

Output on holiday homes is calculated by means of Household Budget Survey data. Output on owner-occupied holiday cabins, or output for own final use, consists of repair costs, water supply and drainage, fire insurance (service charge only), refuse collection, chimney sweeping, etc., electric power, interest and site lease fees. The user cost method is based on the Household budget survey, which is conducted in every 5-6 years or so (latest 2006). The items related to "free-time residences" are included into the output and intermediate consumption of the holiday homes. Between survey years different sort of indicators are used. Output for rental cottages or market output consists of rent, interest and ground rent (cf. Table 24).

**Table 24: Output, intermediate consumption and value added of holiday homes in 2004, EUR million**

	P1	P11	P12	P2	B1G
Holiday homes, total	597	135	461	307	290
Households	529	68	461	245	284
Enterprises	68	68	0	62	6

In addition to the information from the Household budget survey, the output of the holiday homes includes the consumption of fixed capital (K1) linked to the holiday homes. In Finland gross fixed capital formation in P5111S Dwellings includes both the dwellings and the holiday homes. The share of K1 that should be included in the output of the holiday homes is deduced in two parts. First, the ratio of dwelling and holiday home square metres is calculated from the dwelling stock. Second, the relative value of a holiday home square metre to a dwelling square metre is approximated. For new

holiday homes this share is estimated to be around 70-75 per cent. As holiday home stock is mainly rather modest in quality, the relative value of a holiday home square metre is assumed to be 35 per cent of that of a dwelling square metre. The two parts put together, the part of K1 to be used as a part of the holiday home output is around 3.6 per cent of the K1 linked to P5111S, some 220 million euro in year 2006.

The change of calculation method from user cost to the rents\*volume - calculation is connected mainly to the availability of the price data (holiday home rents). At the moment it seems that this price information won't be available in the near future.

#### *Intermediate consumption: dwellings (excluding holiday homes)*

The intermediate consumption for dwellings is calculated as the total of intermediate consumption for yearly repairs, maintenance charges in housing corporations, service charges in real estate company leased and directly leased dwellings, and intermediate consumption items for owner-occupied dwellings. Intermediate consumption is compiled consistently with output. In the gross rent (or output) are included the costs of water supply, drainage, heating and other such fees, in which case they do not influence the level of value added.

**Yearly repairs of residential buildings**, are calculated based on the value of yearly repairs to residential buildings at basic prices in industry 4501 Construction of complete buildings and parts of thereof. In addition yearly repairs as intermediate consumption in industry 7021 Letting and operation of dwellings yearly repairs include value-added tax. Repairs to holiday homes and repairs included in private consumption made by tenants of rental dwellings are deducted from the resulting sum. Both values are calculated from Household Budget Survey data (final consumption expenditure/EUR per household multiplied by the number of dwellings).

The intermediate consumption of housing companies, housing corporations and directly leased dwellings is determined using the dwelling stock's square metre data and cost items per square metre in the financial statement statistics of housing corporations. Intermediate consumption items for detached small houses (single-family houses) are water supply and drainage, sweeping of chimneys, refuse collection, insurance premiums – fire and house (in part) for single-family housing companies, service charge (in part) – and other charges calculated using Household Budget Surveys.

#### *Intermediate consumption: holiday homes*

Intermediate consumption is calculated from the following Household Budget Survey items: repair costs, water supply and drainage, fire insurance (less the portion going to the insurance company), refuse collection charges, chimney sweeping, etc. and power.

### **3.17.3 Letting and operation of real estate (7022)**

Letting and operation of real estate consists of Industry TOL2002 Letting of other real estate (70209). It covers the letting, subletting and leasing of owned or leased office, commercial, industrial, storage, retail, etc. spaces, buildings or real estate, and of agricultural land, forested land, mining rights,

etc. It includes letting, subletting and leasing of hotels or other property for accommodation purposes. The industry includes the activities of real estate companies and mutual real estate companies.

The main calculation data sources are the Business Register, the Structural Business Statistics and the Labour Force Survey. FISIM for the industry is taken from centralised calculations.

### *Output by sector*

#### *S111 Non-financial corporations and Households*

##### *Output*

The output of non-financial corporations and households in the industry is calculated on the basis of Structural Business Statistics and the Business Register. Output consists of the total of turnover, changes in finished product inventories, production for own use and other output from business activities. According to the old calculation method, the industry's output at current prices was calculated using annual changes in price and volume. In the old calculation, commercial and office space leasing data from the Institute for Real Estate Economics were used for the price change. The development of the real estate companies' floor areas is used as the starting point for the volume calculation. The old calculation data are used for comparison purposes.

Both Non-financial corporations and Households belong to producer type 'T10 Market producers'. Their aggregate production belongs to the economic activity 'P11 Market output'.

##### *Intermediate consumption*

Intermediate consumption is calculated as part of output from profit and loss account data in the business income tax register. Output consists of the total of turnover, changes in finished product inventories, production for own use and other output from business activities. Likewise, intermediate consumption is the total of purchases less changes in inventories, services by other parties, leasing fees, other rents and other expenses.

#### *S1313 Local government*

Local government production in industry 7022 covers municipal enterprises classified in the local government sector. The main sources used are the financial statistics of municipalities and joint municipal authorities.

**Table 25. Output, intermediate consumption and value added of Letting and operation of real estate in 2004, EUR million**

	P1	P11	P12	P2	B1G
Total	2 851	2 803	48	1 197	1 654
Non-financial corporations	2 383	2 382	1	977	1 406
Local Government	460	413	47	216	244
Households	8	8	0	4	4

### 3.17.4 Real estate agencies (7031)

Real estate agencies, Industry (7031), covers the handling by contract or for a fee of buildings, real estate, dwellings, office space and farmland, forest or other land and related expert services for evaluating and auctioning real estate and buildings.

The main calculation data sources are Statistics Finland's Business Register, the business income tax register, the Labour Force Survey and the cost structure survey of the Association of Finnish Real Estate Agents. The latter is based on a questionnaire sent to the Association's member enterprises. Roughly 100 enterprises respond to the questionnaire each year. FISIM for the industry is taken from centralised calculations.

#### Output

Industry output mainly comprises property commissions and fees for real estate companies. Output is calculated on the basis of the data in Structural Business Statistics and the Business Register. Output is equal to the total of turnover, changes in finished product inventories, production for own use and other output from business activities.

Industry has production in sectors 'S111 Non-financial corporations' and 'S14 Households'. Production of both sectors belong to producer type 'T10 Market producers' and is recorded as economic activity 'P11 Market output'.

**Table 26. Output, intermediate consumption and value added of real estate agencies at current prices in 2004, EUR million**

	P1	P11	P2	B1G
Total	478	478	198	280
Non-financial corporations	469	469	193	276
Households		9	9	5
				4

#### Intermediate consumption

Intermediate consumption of both sectors is calculated as a share of production using Structural Business Statistics, the Business Register and profit and loss account data in the business income tax register. Intermediate consumption is equal to the total of purchases, changes in inventories, services by other parties, leasing fees, other rents and other expenses. The cost structure survey of the Association of Finnish Real Estate Agents is used as benchmark data and as an alternative source when estimating intermediate consumption.

### 3.17.5 Management of real estate on a fee or contract basis (7032)

Management of real estate on a fee or contract basis (Industry 7032) covers the administration, servicing and maintenance by contract or on a fee basis of privately owned, State or local authority residential and other buildings and real estate, and rent collection activities. Real estate maintenance may

include repairs, cleaning and accounting, etc. The industry comprises the activities of real estate management offices and caretakers.

The main data sources for calculations are the Statistics Finland's Business Register, the business income tax register, the financial statements statistics of housing corporations, and the Labour Force Survey. FISIM for the industry is taken from centralised calculations.

### *Production by sector*

#### *S111 Non-financial corporations and S14 Households*

##### *Output*

Output consists of the output from Non-financial corporations and Households in the industry, i.e. property management offices. Output is equal to the total of turnover, changes in finished product inventories, production for own use and other output from business activities. Output is calculated from the data in structural business statistics and the Business Register.

Production is recorded as producer type "T10 Market producers". The output is recorded as economic activity 'P11 Market output'.

##### *Intermediate consumption*

Intermediate consumption for **Non-financial corporations** and Households is calculated as part of output by means of profit and loss account data in the business income tax register. Intermediate consumption is equal to the total of purchases less the change in inventories, external services, leasing rents, and other rents and miscellaneous expenses.

#### *S112 Housing corporations*

##### *Output*

The output of sector S112 Housing corporations in Industry '7032 Management of real estate on a fee or contract basis' consists of the compensation of housing corporation employees. Compensation of employees is calculated as the product of the total floor area of housing corporations and the staff wage costs per square metre of the housing corporation stock. The financial statement statistics of housing corporations are used as the source of staff wage costs, and the floor area in square metres is obtained from the dwelling stock.

Output of sector 'S112 Housing corporations in Industry '7032 Management of real estate on a fee or contract basis' is related to the division brought about in the housing corporations sector in conjunction with the reform of supply and use tables. To make it more simple, the share of ownership dwellings belonging to the housing corporation sector in the previous calculation method, i.e. output of housing companies, is distributed in the way of calculating it into owner sectors as such, mainly households. It was decided not to allocate the wages of housing company caretakers in the dwelling industry (SIC 7021 Letting and operation of dwellings) to wages or even to the production accounts of owner sectors. The owner sector choice was influenced by the fact that it desirable that households should not

become employers. The industry itself was defined according to the nature of caretaker activities. The change in methodology itself did not have an impact on the level of output of market corporations.

The production of housing corporations belongs to producer type 'T10 market producers'. The output is recorded as economic activity 'P11 Market output'.

Intermediate consumption is not calculated for residential property companies.

### *S1311 Central government*

#### *Output*

The output of Industry '7032 Management of real estate on a fee or contract basis' consists of production by the defence administration's construction utility. General government output is calculated based on general government accounting.

#### *Intermediate consumption*

Intermediate consumption of the industry is also calculated based on general government accounting.

**Table 27. Output, intermediate consumption and value added of real estate management and administration in 2004, EUR million**

	P1	P11	P2	B1G
Total	1 225	1 225	497	728
Non-financial corporations	936	936	380	556
Housing corporations	121	121	7	114
Central government	122	122	92	30
Households	46	46	18	28

### **3.17.6 Business services (KB)**

Business services production consists of services produced by Non-financial corporations for general government and other Non-financial corporations. Production has been on the increase as trade, manufacturing, construction firms and general government contract more and more of their service activities.

The business services industry comprises four two-digit categories in accordance with TOL2002. These categories are:

- Renting of machinery and equipment without operator and of personal and household goods (71)
- Computer and related activities (72)
- Research and development (73)
- Other business activities (74)

The last category comprises very different activities. At the accounting level, this category is divided into eight three-digit categories as follows:

- Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy activities; management activities of holding companies (741)
- Architectural and engineering activities and related technical consulting (742)
- Technical testing and analysis (743)
- Advertising (744)
- Labour recruitment and provision of personnel (745)
- Investigation and security activities (746)
- Industrial cleaning (747)
- Miscellaneous business activities n.e.c. (748)

In the national accounts, the accounting unit for business services is the establishment. In 2004, over 63 000 establishments (36 000 enterprises) operated in the business services industry.

### 3.17.6.1 *Main data sources*

The main data sources for national income estimates are those compiled by Statistics Finland: the Business Register, structural business statistics, the Labour Force Survey and different indices.

When compiling the final accounting figures, two key basic statistics are available: the Business Register and the structural business statistics. They are exhaustive aggregate data based on direct surveys conducted of enterprises and establishments and on the Tax administration's database.

The advantages of the Business Register are that it is based on industries and it is exhaustive, but its information content is scanty from the accounting standpoint. The structural business statistics are based on enterprises. Regardless of this, the structural business statistics have become the most crucial data source for national accounts estimates as their content and concepts satisfactorily meet accounting needs.

To ensure exhaustiveness, the total level of industries is defined on the basis of the Business Register. Data from the structural business statistics are used in the estimates as a primary source whenever possible. As it is known that the structural business statistics do not contain small industries under a certain size limit and establishments of non-profit institutions serving households, they are added from the Business Register, similarly as are establishments of multi-industry enterprises. Data calculated from the data of single or multi-establishment enterprises are used as structural data for the establishments to be added (e.g. percentage of output of turnover).

When calculating employment and labour input, the Labour Force Survey is used in addition to the Business Register. All data sources are issued annually and are exhaustive and reliable.

Another adjustment applies to establishments in the Business Register belonging to business services already included in manufacturing projections. In the Business Register, every establishment is classified exactly in its own industry, whereas in structural business statistics for manufacturing the aim is to portray manufacturing activities as a whole. Consequently, structural business statistics for manufacturing show some

establishments belonging to business services, e.g. Research and development (Industry 73) and Architectural and engineering activities and related technical consulting (Industry 742). Efforts were made to avoid the duplication of establishments by extracting such establishments from data on business services.

### 3.17.6.2 Calculation methods

The same calculation method is applied to all business services. The calculations begin by determining market output and output for own use, the sum of which gives output at basic prices. Next, the intermediate consumption at purchasers' prices is deducted from this output, resulting in gross amount value added at basic prices.

#### *Output*

Output at basic prices consists of market output with hidden economy and own use output added to it (computer software).

In business services the calculation of output starts with turnover. Changes in finished product inventories, production for own use and other output from business activities are all added to turnover, in accordance with structural business statistics. Goods for resale purchased in the financial period are deducted from this adjusted by the change in purchase inventories.

In other returns on business activities, capital gains on mergers and sale of fixed assets are distinguished from other returns of a more permanent kind, such as rental income. Capital gains on sales of fixed assets and mergers do not count as output because they do not comply with the national accounting concept of income.

The share of production belonging to the hidden economy has been determined on the basis of a survey by Pekka Rytönen Oy, Consultants. The share of the hidden economy in business services is 0.5%.

#### *Intermediate consumption*

In business services purchases mainly comprise other materials and supplies than merchandise, so they are included in intermediate consumption and they are not treated as deduction items on output. Increase in purchase inventories decrease intermediate consumption.

Financial leasing has to be deducted from intermediate consumption calculated by means of structural business statistics data, as it must not be counted in intermediate consumption. Data on financial leasing rents paid are available from the statistics on financial leasing only by main industry. Financial leasing rents to be deducted from intermediate consumption are divided to sub-industries of business services in relation to leasing rents of structural business statistics.

The second item deducted from intermediate consumption is computer software, part of whose acquisition costs are included in structural business statistics under the item 'software design and programming services'. In the estimates, 30% of this item is deductible from intermediate consumption. The share is estimated by comparing the total level of software investments

with the data derived from the structural business statistics inquiry. In the questionnaire enterprises are asked about investments in computer software as supplementary balance sheet data.

Data on capital losses on mergers and sales of fixed assets included in other expenses in the profit and loss account are to be found in the structural business statistics. These items are neither recorded in intermediate consumption.

Other expenses in the profit and loss account also comprise a number of other expense items, which are not treated as intermediate consumption in the national accounts. Such are part of benefits in kind, part of insurance contributions on property, real estate taxes and other taxes on production. An estimate is made of benefits in kind by comparing the pay data in the Business Register and in the structural business statistics. Industry-specific data on other taxes on production are derived from centralised calculations. Data are available on insurance premiums on property and real estate taxes only on the level of the entire business sector. A rough estimate is made of the share of manufacturing by means of capital stock data.

### 3.17.7 *Central government and non-profit institutions*

In Industry K can be found Other non-market output for central government in the following industries: Research and development (73), Technical consultancy, technical testing and analysis (742) and Miscellaneous business activities n.e.c. (748). The output of non-profit institutions is found in Research and development (73).

#### 3.17.7.1 *Market producers*

In 1995-1998, the State Real Property Agency acted as a central government market producer in the industry 'Real estate leasing and management' (7022) before it became an unincorporated state enterprise in 1999. From 1995, the defence administration's construction utility also acts as a central government market producer in the industry 'Management of real estate on a fee or contract basis'. The calculation methods in these industries are otherwise the same as those for other central government finances, but the defence administration's construction utility is now treated as market producer in that the calculations are now made from the top down, so to speak. The market output of the unit consists of industry output at basic prices, and the industry's value added is obtained by deducting intermediate consumption from output. The operating surplus is obtained when consumption of fixed capital and compensation of employees are deducted from value added.

Calculation of the State's industries is explained in Section 3.18.1.  
Calculation of non-profit institutions is explained in Section 3.20.4.

## 3.18 *General government; compulsory social security (L)*

NACE L	Output	IC	GVA
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1	Basis for NA figures	<b>11648</b>	<b>5697</b>	<b>6191</b>	} Data valid.
2	Allowances and adjustments	<b>5</b>	<b>2</b>	<b>3</b>	
3	Balance-sheet result	<b>11653</b>	<b>5699</b>	<b>6194</b>	
4	Reallocations for national accounting	<b>562</b>	<b>-14</b>	<b>336</b>	} Balancing
	Reallocations for alignment with ESA 95	<b>562</b>	<b>-14</b>	<b>336</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>562</b>	<b>-14</b>	<b>336</b>	
5	National-accounting result (rounded)	<b>12215</b>	<b>5685</b>	<b>6530</b>	
6	Macroeconomic reconciliation adjustment				
7	<b>Final NA estimate</b>	<b>12215</b>	<b>5685</b>	<b>6530</b>	

This industry only contains the output of central and local government finances and social security funds.

A general description of public institutions is given here. These are central government finances, local government finances and social security funds.

### 3.18.1 Central government

The central government's share of value added in the economy has been around 5% for the last twenty years. During the recession at the start of the 1990s, the central government's share of GDP increased exceptionally to almost 7%, but by the end of the millennium it had returned to its earlier level. The central government's role in national productivity is not of any great significance. Production of public services in our society is largely the responsibility of the local authorities.

The central government's task is rather to see to the redistribution of income. Most of the national revenue accrues from direct and indirect taxation while roughly 60% of expenditure consists of various benefits paid, grants and income transfers. The other significant expenditure items are wages and salaries, intermediate consumption and debt interest payments, an item which rose sharply in the 1990s. Total central government expenditure in recent decades amounted to roughly one quarter of GDP. In the early 1990s, a rare public economy record was achieved: the central government's share of GDP spending rose to over 35% for a few years in a row.

In addition to being responsible for the final accounts of offices charged with budget accounting duties, central government controls extra-budgetary funds: the Development Fund of Agriculture and Forestry, the Oil Pollution Compensation Fund, the National Nuclear Waste Management Fund, the National Housing Fund, the State Pension Fund, the National Export Guarantee Fund, the National Emergency Supply Agency, the Intervention Fund of Agriculture, the Government Guarantee Fund, the Fire Protection Fund and the National TV and Radio Fund. Unincorporated state enterprises, belong to the enterprise sector. In 2004 unincorporated state enterprises

were: Senate Properties, the Shipping Enterprise, the Finnish State Pilotage Enterprise, the Finnish Forest and Park Service, the Civil Aviation Administration, and the Finnish Road Enterprise. Also belonging to the enterprise sector are companies over which the government has partial or full control.

In 2004 central government production is divided among 13 accounting industries: 6301 Railway development; 6302 Road development; 6309 Other supporting transport activities; 7032 Management of real estate on a fee or contract basis; 73 Research and development; 742 Technical services, testing and analysis; 748 Miscellaneous business activities; 751 Public administration; 752 Defence equipment and conscripts, 80 Education; 851 Human health activities; 853 Social work activities, and 92 Recreational, cultural and sporting activities.

Until 2000 civil engineering includes the production activities of the Road Administration from which the Finnish Road Enterprise was hived off at the start of 2001. Railway development consists of the Railway Administration Centre, road development consists mainly of the Road Administration's administrative activities and other auxiliary transport activities consist of the Finnish Maritime Administration. The output of the real estate leasing and management industry includes the activities of the State Real Property Agency before it became an unincorporated state enterprise at the start of 1999. Management of real estate on a fee or contract basis includes the defence administration's construction utility since 1995, when it became an agency separate from the defence forces. Research and development is performed by the Technical Research Centre of Finland (VTT) the Finnish Forest Research Institute (METLA), MTT Agrifood Research Finland, the Geological Survey of Finland (GTK), the National Public Health Institute (KTL) and the Academy of Finland. The key technical service agencies belonging to the industry are the National Land Survey of Finland (NLS) and the Radiation and Nuclear Safety Authority (STUK). Miscellaneous business services mainly involve the Ministry of Labour's Employment and Economic Development Centres' employment departments.

The key government activities are obviously in the central government sphere. In this industry, departments of note are the Ministry of Defence, the National Board of Taxes and the various ministries. The defence equipment and conscripts' industry includes conscript training for the defence forces and defence materiel procurement. Among key departments in the education industry are universities and academic institutions at university level. Health care services and social services consist mainly of the activities of the National Research and Development Centre for Welfare and Health (STAKES). The production of recreational, cultural and sporting activities involves mainly the functions of the Ministry of Education, the Governing Body of Suomenlinna, and the Finnish National Gallery.

### **3.18.1.1 Main data sources**

In compiling the government sector of the national accounts, the main data sources are consolidated central government accounting data and the Financial Statement and Report of Central Government (cf. Chapter 11). In assessing employment levels, government employee data from the Research

Institute of the Finnish Economy (ETLA) and the Labour Force Survey are used.

### 3.18.1.2 Calculation method

The methods for different industries are basically similar. The calculation methods common to all industries are shown below. Exceptions will be separately discussed.

Calculations are performed from the bottom up (in industry 7032, from the top down, because this industry has only market producers in the central government sector). By adding wages and salaries and employers' social contributions, the total for compensation of employees is found, which is equal to the net value added. The gross value added is obtained by adding consumption of fixed capital to net value added. When intermediate consumption is then added to gross value added, output at basic prices is obtained.

When sales items (Market output P11 and Other non-market output P131) and output for own final use (P12) are deducted from output, other non-market output (P131) is obtained as a production and generation-of-income account residual. Other non-market output together with social benefits in kind (D631K) form central government final consumption expenditure (P3K).

#### Output

The central government sector's output is obtained by totalling compensation of employees, consumption of fixed capital and intermediate consumption. The output is further divided into **market output**, including mainly income obtained from economic transactions, rental income and various operating charges, **sales of non-market products** consisting chiefly of output resulting from transactions governed by public law, **output for own final use** that includes only own-account produced computer software and costs related to maintenance of conscripts and **other non-market output**, obtained by deducting the above mentioned items from output.

#### Intermediate consumption

Key items to be calculated as intermediate consumption are materials, supplies and goods, rents, various purchases of services, various payments and value-added-type taxes added to the above. The total of separately purchased software investments, which are counted as investments, is deducted from the intermediate consumption of each industry.

#### Value added

Wages and salaries consist mainly of remuneration from general government posts and employment relationships. In the defence equipment and conscript industry, benefits in kind, which cover meals, travel and uniforms obtained by conscripts and conscientious objectors who perform alternative service, are added to wages and salaries.

Employers' social contributions are obtained directly from each account for non-wage labour costs in central government on-budget accounting. An exception to this is the account for "accident insurance premiums", which is

divided between accident and group life insurance premiums. In addition, payments from the "Change in the liability for non-wage labour costs for holiday pay" account are broken down into the various types of contribution in proportion to the other social security contributions paid.

Consumption of fixed capital in the central government sector is obtained from the capital stock model.

**Table 28. Central government production/generation-of-income accounts by industry, 2004**

<b>Production account</b>	<b>6301</b>	<b>6302</b>	<b>6309</b>	<b>7032</b>	<b>73</b>	<b>742</b>
<b>Output at basic prices</b>	431	981	196	122	826	192
Market output	51	4	134	122	124	70
Output for own final use					5	1
Sales of non-market products	0	0	0		0	23
Other non-market output	380	977	62		697	98
Intermediate consumption at purchasers' prices	245	346	105	92	294	68
<i>Value added, gross at basic prices</i>	186	635	91	30	532	124
Consumption of fixed capital	180	587	53	0	48	8
<i>Added value, net at basic prices</i>	6	48	38	30	484	116
<b>Generation-of-income account</b>						
Wages and salaries	5	38	30	32	393	94
Employers' social contributions	1	10	8	8	91	22
<i>Operating surplus/mixed income, net</i>				-10		

<b>Production account</b>	<b>748</b>	<b>751</b>	<b>752</b>	<b>80</b>	<b>851</b>	<b>853</b>	<b>92</b>
<b>Output at basic prices</b>	145	5498	686	2026	48	23	56
Market output	10	499	0	255	40	14	8
Output for own final use		74		10			
Sales of non-market products	0	43	0	0	0	0	0
Other non-market output	135	4882	686	1761	8	9	48
Intermediate consumption at purchasers' prices	43	2226	571	720	9	9	29
<i>Value added, gross at basic prices</i>	102	3272	115	1306	39	14	27
Consumption of fixed capital	3	271		81	8	1	8
<i>Added value, net at basic prices</i>	99	3001	115	1225	31	13	19
<b>Generation-of-income account</b>							
Wages and salaries	80	2373	115	998	24	10	15
Employers' social contributions	19	628	0	227	7	3	4
<i>Operating surplus/mixed income, net</i>							

### 3.18.2 Local government

In this chapter, local government calculations will be examined. The local government sector is demarcated by the activities of municipalities and joint municipal authorities, the Government of Åland (incl. its pension fund), public activities of the Association of Finnish Local and Regional Authorities and the Commission for Local Authority Employers. In this context, public activities denote the activities of units whose output accounts for less than 50% of costs when the unit meets the criteria for an institutional unit. Hence, commercial activities of municipalities and joint municipal authorities do not come under the local government sector as a whole, but part of their utilities are counted as quasi-corporations in the non-financial

corporations sector. The commonest municipal utilities are heating and electric power plants, water supply and purification plants, harbours, and mass transit authorities.

The production activities of the institutional units in the sector (e.g. enterprise, local government, central government) are divided into establishments. The latter are either of the market or non-market producer type, and their type is determined by the main output of the production unit. Market producers cover at least 50% of their production costs by sales output. Non-market producers are either own final use producers or other non-market producers. The output of other non-market producers is financed mainly by tax revenue (production of central and local government services) or by income transfers/members' dues (production of services of non-profit institution serving households).

Producer types are further classified in accordance with the Standard Industry Classification (TOL2002). This is used to describe production activity (production account economic activities, formation of fixed capital, level of employment and work contribution). The following industries are calculated in the local government sector: Growing of forests (0211), Civil engineering (4502), Water transport (61), Road development (6302), Letting and operation of real estate (7022), Miscellaneous business activities n.e.c. (748), Administration of the State (751), Education (80), Health and social work (85), Sewage and refuse disposal, sanitation and similar activities (90), and Recreational, cultural and sporting activities (92). Growing of forests (0211), Letting and operation of real estate (7022), Miscellaneous business activities n.e.c (748), and Sewage & refuse disposal, sanitation and similar activities (90) are market producers, and other industries are Other non-market producers. Municipalities and joint municipal authorities are also involved in industry Real estate activities with own property (701). Due to the insufficiency of source data, no separate production accounts are calculated for that industry. Instead, it is included as ancillary production in the industries of other local government sectors.

The local government share of value added in Finland's GDP was 12.8% in 2004. Correspondingly, its share of final consumption expenditure amounted to 62.5%. Municipalities and joint municipal authorities produce almost all of Finland's educational, health care and social services.

**Table 29: Share of value added of local government industries compared to that of aggregate national accounts, in 2004.**

Industry:	Local government share of value added:
0211 Growing of forests	2.4%
4502 Civil engineering	7.2%
61 Water transport	0.8%
6302 Road development	31.1%
7022 Letting and operation of real estate	14.8%
748 Miscellaneous business activities n.e.c	6.0%
751 Administration of the State	44.6%
80 Education	65.6%
851 Health activities	78.3%

852 Veterinary activities	29.5%
853 Social work activities	73.6%
90 Sewage and refuse disposal, sanitation and similar activities	5.0%
92 Recreational, cultural & sporting activities	32.1%
Municipal institutions, industries total	12.8% of GDP

### 3.18.2.1 *Main source materials*

The key data sources in the local government sector are

a) for financial data at current prices: the statistics on the finances and economic activities of municipalities and joint municipal authorities, the financial statement of the Government of Åland, (Bokslut för landskapet Åland), the annual report of the Government of Åland's pension fund (Landskapet Ålands pensionsfond, verksamhetsberättelse), annual reports of the Association of Finnish Local and Regional Authorities and the Commission for Local Authority Employers;

b) for employment data: "Local Authority Sector Wage Statistics", published by Statistics Finland; "Local Authority Sector Monthly Salaries", based on the local authority staff register. It contains staff numbers and a cross-section of aggregate data for October; and Statistics Finland's Labour Force Survey.

The main source of data, in a) above contains all statistical units belonging to local government, compiled annually (in 2004, there was a total of 444 municipalities, 237 joint municipal authorities in addition to the units in a) above). The key employment data source "Local Authority Sector Wage Statistics" is likewise based on aggregate data. Other sources are issued annually, the labour statistics monthly.

### 3.18.2.2 *Production and generation of income: other non-market producers*

Local government production of other non-market producers is calculated by means of costs. Output at basic prices is assessed at the same value as inputs, i.e. total input. The production and generation-of-income accounts reflect the kind of input used to generate products for government activities, and the way production is separated into government consumption (P13 Other non-market output), income from products sold (P11 Market output, P139 Sales of non-market products) and goods and services produced for own use (P12 Output for own final use). No operating surplus is considered to arise from the activities of other non-market producers.

The gross value added components of other local government non-market producers are wages and salaries, employers' social contributions, consumption of fixed capital and other taxes on production. Output at basic prices is the sum of gross value added and intermediate consumption.

Some goods and services produced by local government are sold on the market at prices that cover production costs. On this basis, they are defined as market products and sales revenues are recorded in the production account as market output (P11). Part of what is produced is sold as so-called non-market products on which sales revenues are not intended to cover production costs. These products are recorded in Sales of non-market

products (P139). When the sales income from these different products and output for own final use (P12) are deducted from output calculated as the total cost (P1), other non-market output (P13) is obtained as a production and generation-of-income account residual. Other non-market output together with social benefits in kind reflects central government final consumption expenditure (in P3K sector accounts).

Next, calculation solutions for production accounts will be described according to economic activity: Industries 751 Administration of the State, 80 Education, 851 Human health activities, 852 Veterinary activities, 853 Social work activities, 90 Sewage and refuse disposal, sanitation and similar activities, and 92 Recreational, cultural and sporting activities. The industries are obtained by combining function types in the main source Table 01 (cf. Questionnaire, Part II). The calculation method of the Industries 4502 civil engineering and 6302 Road development that belong to other non-market producers differs somewhat from the above, hence it will be treated separately below.

### *Value added*

**Wages and salaries** (D11K) include financial statistics Table 01 (cf. Questionnaire, Part II) under expenditure category "Wages and Salaries". Municipal financial statistics show the latter as net, i.e. wages and salaries with rectifying staff benefits deducted in local government profit and loss accounts. In national account calculations, any monetary benefits in kind received by an employee are added to wages and salaries and deducted at the same time from intermediate consumption.

Wages and related social contributions of relief agricultural workers are registered in the national accounts in the agriculture industry production account. They are deducted from local government financial statistics wages and salaries (Industry 853) when calculating the local government production account.

**Employers' social contributions** are compulsory, optional and imputed social contributions paid by employers.

Employers' compulsory social contributions are the national pension, employee pension, statutory accident, unemployment and group life insurance contributions paid by employers. Compulsory social contributions are calculated by multiplying the industry's annual total of wages and salaries by the average percentage of the insurance premium in question.

Employers' optional social contributions are got by deducting any compulsory social contributions from the total contributions paid by local government (Questionnaire Form, Part II, Table 01, Line: 0370 Pension insurance premiums and 0380 Other social security contributions). Optional social contributions consist of optional accident insurance and pension plans paid by local government.

Municipalities and joint municipal authorities have been making financed pension plan contributions since 1988. The central government has continued to pay the pension contributions of comprehensive and upper secondary school teaching staff employed by local government directly from the budget. In local government estimates, the imputed pension allocation of such teachers is recorded in the employer's imputed social contributions

(D122K), so that the generation of income by different types of producer will be commensurate. All pension allocations for comprehensive and upper secondary school teachers were imputed until 1997. From 1998, progressive financing of future pension payments of such teachers was also begun. The portion paid by the local government rises each year. Imputed social contributions have been decreasing since 1998 as a result and the financed portions have been transferred as employee pension insurance payments. Imputed social contributions are obtained using imputed employee pension contributions from the total wages and salaries of comprehensive and upper secondary school teachers. Since 2001, imputed social contributions no longer exist because the percentage rate of the national employee pension insurance premium (VEL) on which they were based exceeded the rate of the imputed employee pension insurance premium.

**Other taxes on production (D29K)** include vehicle operating fees paid by local government (Industry 751) and waste management taxes (Industry 90, dating from 1996). The former data are based on central projections for national accounts and the latter on data in final central government accounts.

Calculations for **consumption of fixed capital** are based on the national accounts' capital stock model. Consumption of fixed capital by local government is calculated for residential buildings, non-residential buildings, civil engineering and other buildings, transport equipment, other machinery and equipment, computer software and major land and other improvements.

### *Intermediate consumption*

The following expenditure categories in the financial statistics of local government (Part II, Table 01) are calculated for intermediate consumption: customer service purchases from central government, municipalities, joint municipal authorities and others; purchases of other services, materials, supplies and goods, miscellaneous expenses, and external rent expenditure. During the period 1997-1999, internal and external rent payments were not separated in municipal financial statistics. Instead, they were combined under the item 'rent payments'. Because only external rents are included in municipal accounting in the national accounts, the share of such payments were estimated for the above years according to figures entered in the 2000 financial statistics.

The municipalities, using central government transfers, finance part of the health and social services production of joint municipal authorities. These transfers appear in the financial statistics of these industries as purchases of client services from joint municipal authorities. These transfers between municipalities and joint municipal authorities are taken out of intermediate consumption. In sector accounts, cash flow is included in the economic activity 'Central government transfers to municipalities, joint municipal authorities'.

Purchases of customer services by local government from others include services purchased directly from enterprises, foundations, associations and parishes for residents without any payment by residents. These purchases are treated, not as intermediate consumption, but as social transfer payments (benefits in kind), as they are not part of the service production of municipalities and joint municipal authorities. These transfer payments in kind are recorded directly in government consumption.

Local government software investments are to be found in central calculations of the national accounts. These acquisitions appear in the financial statistics of municipalities and joint municipal authorities as 'purchases of other services' (90%), in intermediate consumption', and as 'machines and equipment' (10%) in investments. In order to avoid repetition, the above items must be deleted from intermediate consumption and investments in machines and equipment. Also deducted from intermediate consumption are payments of cash benefits in kind, which are transferred to wages and salaries.

Value-added tax paid by local government is taken from Table 1 in municipal financial statistics from economic activity 2965 'reimbursement system value-added tax', which is reflected in the value-added tax returned to municipalities by central government applying to intermediate consumption. This paid and reimbursed value-added tax is added to intermediate consumption.

As was observed above, the value of production, P1 **output at basic prices** is calculated as the sum of gross value added and intermediate consumption.

### *Industries 4502 Civil engineering and 6302 Road development*

Most of the aggregate national account level production of Industries 6302 Road development and 4502 Civil engineering is produced in the enterprise sector by market producers. Non-market production also occurs in these sectors produced by the municipalities and central government, among others. The task of local government in this sphere is considered in the national accounts to be the construction and maintenance of roads and streets, together with other civil engineering structures (sports, landscaping and parking areas, airports, for example).

In the 6302 Road development industry of local government are shown the investments made in the new construction and repair of worn road networks. The industry is considered to be demand driven, the requested construction of the road network being produced by the civil engineering industry in the enterprise sector, i.e. the municipalities purchase road construction materials and services on the market. Only consumption of fixed capital (K1K), which impacts added value as much as final consumption expenditure, is shown in the local government production account of the industry. The data source used for these enterprise sector produced road investments requested by municipalities is Table 02 in the financial statistics of municipalities and joint municipal authorities under Task 460 'Traffic arteries'. Data on the consumption of fixed capital, i.e. consumption of road networks, are obtained from the national accounts' capital stock model.

In the industry 4502 Civil engineering industry of local government are shown the maintenance of roads and streets and the construction and maintenance of other civil engineering structures. The municipalities are responsible for the production of these services. The production account of the industry is calculated in two parts. First to be calculated is the maintenance share, the data source for which is Table 01 in the financial statistics under Task 460 'Traffic arteries'. Maintenance related wages and salaries, social contributions, intermediate consumption and sales items for maintenance are obtained from this source. Added to these economic activities are figures for the Government of Åland, to be found in its

financial statement. Additionally, value-added tax, to be found in central government sector data, is added to intermediate consumption. Data on the consumption of fixed capital are obtained from the national accounts' capital stock model.

Next, new construction of other roads and streets is calculated. The data are to be found in financial statistics Table 02 under economic activity 'Fixed structures and equipment' from financial statistics tasks other than 460 'Traffic arteries'. The output is obtained from this investment demand, produced by the municipalities. This output is divided into intermediate consumption and compensation of employees in Table 05 under civil engineering investment in proportion to 'staff benefits', 'services' and 'materials, equipment and goods'. The civil engineering industry is assumed not to produce an operating surplus. Adding together the two parts – maintenance and new construction of other than roads – gives local government's civil engineering production account.

### 3.18.2.3 *Production and generation of income: market producers*

Among local government industries, 0211 Growing of forests, 7022 Letting and operation of real estate, 748 Miscellaneous business activities n.e.c and 90 Sewage and refuse disposal, sanitation and similar activities are market producers. Market producers are those which cover at least 50% of costs through sales. Their output is mostly market output (P11), but they may also have output for own final use (P12). They are excluded from having other non-market output (P13). The production accounts of market producers, starting with output, are calculated from the top down. The gross added value is obtained by deducting intermediate consumption from output. The operating surplus, which is shown in the sector account, is obtained when compensation of employees and other taxes on production are deducted from added value and other subsidies on production are added to it.

The main sources used to calculate Industry 0211 Growing of forests are the financial statistics of municipalities and joint municipal authorities (Table 01: Task 660). The industry's market output (P11), intermediate consumption (P2K) and compensation of employees (D1K) are obtained directly from municipal financial statistics. Output for own final use in forestry and major improvement work (P12), an estimate of which is to be found in the Finnish Forest Research Institute's silviculture and major improvement work statistics, are added to the calculations. Consumption of fixed capital is obtained from central accounting of the national accounts.

Industries 7022 and 748 consist of municipal enterprises classified in the local government sector. The main source used to calculate these industries is the financial statistics of municipalities and joint municipal authorities (Table 11).

**Table 30: Local government production and generation of income by industry in 2004, EUR million**

Transaction/ Industry	0211	4502	61	6302	7022	748	751	80	851	852	853	90	92	Total
P1R Output at basic price	60	657	12	290	460	166	5046	5634	7636	35	4340	99	1152	25587
P11R Market output	55	262	1		413	166	1746	239	757	12	335	99	129	4214

P12R Output for own final use	5			47		49	72	34		20		15	242	
P139R Sales of non-market products		136				236	67	504	1	638		73	1655	
P13R Other non-market output		259	11	290		3015	5256	6341	22	3347		935	19476	
P2K Intermediate consumption at purchasers' prices	21	538	5		216	78	2412	1378	2586	17	885	72	392	8600
B1GPH Gross value added at basic prices	39	119	7	290	244	88	2634	4256	5050	18	3455	27	760	16987
K1K Consumption of fixed capital	3	3		290	2	1	397	437	328		182	7	171	1821
D1K Compensation of employees	11	116	7		103	68	2236	3819	4722	18	3273	12	589	14974
D11K Wages and salaries	9	89	6		77	53	1715	2957	3622	14	2508	10	453	11513
D12K Employers' social contributions	2	27	1		26	15	521	862	1100	4	765	2	136	3461
D29K Other taxes on production							1					14		15
D39R Other subsidies on production														
B13N Operating surplus/mixed income, net	25				139	19						-6		177

### 3.18.3 Social security funds

#### 3.18.3.1 Employment pension insurance (7531)

The industry includes insurance companies, pension funds and trusts specialised in statutory (compulsory) employment insurance and other pension institutions.

In Finland, statutory employment pension insurance, compulsory for all employers, is in the sector classification in the general government subsector under social security funds. There are several private employment insurance systems: TEL (Employees' Pensions Act) for private sector employee pensions, LEL (Temporary Employees' Pensions Act), TaEL (Pensions Act for Performing Artists and Certain Groups of Employees), MEL (Seamen's Pensions Act), MyEL (Farmers' Pensions Act), YEL (Self-employed Persons' Pensions Act), KuTEL (Local Government Employees' Pensions Act), VEL (State Employees' Pensions Act) and KiEL (Evangelical-Lutheran Church Pensions Act). In addition, the employees of the Bank of Finland and the Social Insurance Institution of Finland and those of the Government of Åland have their own pension funds.

In recent years the public sector pension types have been harmonised with the private sector TEL system. In addition, the private sector TEL, LEL and TaEL will be merged under one law from the beginning of 2007.

While they are many, each pension systems manages its own section of the labour force's compulsory pension cover. Despite this, pension companies, foundations and funds grant insured persons or employees pensions calculated with uniform bases regardless of how successful the investments of the pension institution of the insured have been. The employer is in charge of selecting the pension institution and profitable investments can be compensated in employers' final pension contributions.

Around one quarter of the private sector pension contributions are consolidated for future pensions. The proceeds of the funds can help to reduce pension contributions permanently.

The joint organ for private sectors in the otherwise decentralised employment pension system is the Finnish Centre for Pensions. The State Pension Fund is a non-independent fund under the central government sector

supervised by the Ministry of Finance. The State Pension Fund is managed by the State Treasury. The Local Government Pensions Institution, in charge of pensions for local government officeholders and employees operates under the Ministry for the Interior.

The employee pension system in Finland is well supervised and regulated with information being readily available. The Statistics on Insurance Companies, published annually by the Insurance Supervisory Authority in the Official Statistics of Finland series, contain the profit and loss account and balance with appendages for pension insurance companies. The authority also publishes aggregate data on pension trusts and funds. The annual reports and financial statement data of other pension institutions listed above are also available. The Federation of Finnish Insurance Companies publishes a summary of financial statement data of pension insurance companies in May each year, which is used in compiling the preliminary estimate.

Output in the industry is calculated through expenditure. It is the combined total of value added and intermediate consumption. Available are unit-specific wage bill data for compensation of employees and companies' other operating expenses for intermediate consumption. Pension funds operate in connection with the parent company, which are in charge of their accounting, so no wage and salary expenses and social contributions will arise.

Consumption of fixed capital is obtained from the national accounts' capital stock model.

### **3.18.3.2 Other compulsory social security (7539)**

According to Finland's standard industrial classification SIC 95, compulsory social security activities (7530) are divided into Social Insurance Institution (75301), statutory employment insurance (75302) and other compulsory social security activities, which include funds and benefit societies specialising in unemployment insurance (75309). The subindustry "Other compulsory social security" covers classes 75301 and 75309. These industries account for roughly 0.2% of Finland's GDP.

In Finland, the activities of the following funds are involved in the industry:

- The Social Insurance Institution of Finland (KELA)
- The Unemployment Funds (TYKA)
- The Unemployment Insurance Fund (TVR)
- The Education Fund (KER)
- Sickness insurance benefits in accordance with the Sickness Insurance Act are paid by the Sickness Funds together with so-called supplemental funds which grant additional sickness benefits.
- Funeral and Redundancy Relief Funds
- The Association of Insurance Funds.

The main activity of these funds is to bring about social benefits and they must meet the following criteria:

a) Certain population groups are obliged by law or statute to participate in the system, i.e. pay social security contributions;

b) General government is responsible – irrespective of its task as a supervisory entity or as an employer – for the performance of the institution in resolving or approving payments or benefits.

There is usually no direct connection between the payments made by individuals and the risk which they undergo.

The **Social Insurance Institution** (KELA) looks after the basic security of residents in Finland in various life situations.

**Facts about Kela**

	2002	2003	2004
Total expenses, EUR billion	10.0	10.3	10.6
Operating expenses/Total costs, %	3.1	3.2	3.3
Benefit expenses per person, EUR per year	1859	1902	1951
Staff numbers	6124	6171	6082

**Benefits paid by the Social Insurance Institution, EUR mil.**

	2002	2003	2004
National pensions and disability benefits	2 900	2 875	2 848
Sickness insurance benefits	2 471	2 681	2 879
Rehabilitation benefits	266	287	287
Unemployment benefits	1 136	1 177	1 200
Children's allowances	1 747	1 734	1 799
Financial aid for studies	727	727	731
Housing allowances	413	430	436
Other benefits	17	21	36
Total expenditure on benefits	9 677	9 930	10 216

**Unemployment Funds** are corporate bodies operating with mutual responsibility, whose purpose is to ensure the safety of earnings intended by the unemployment laws for their members. The unemployment funds pay their unemployed members earnings-related daily unemployment or training allowances. In addition, they may pay other forms of support. The funds are entitled to central government transfers, allocated to daily unemployment allowances paid by the unemployment fund and to other unemployment benefits and administrative expenses. Unemployment funds were underwritten by the Central Fund of Unemployment Funds, under the control of the Ministry of Social Affairs and Health until the Unemployment Insurance Fund (cf. below) was set up in 1998. At the start of 1999, there were 49 unemployment funds in Finland.

**The Unemployment Insurance Fund** is an independently run employer/employee financed body under the Ministry of Social Affairs and Health's supervision, whose purpose is to finance unemployment security benefits. The fund's resources are collected as compulsory unemployment insurance contributions from employers and employees. It supplies the financing needs of earnings related unemployment insurance to the extent to which the State and individual unemployment funds are not obliged. The fund also meets certain other expenditure requirements.

**The Education Fund (earlier the Training and Redundancy Payment Fund)** paid until 2002 to employees redundancy payments at the end of their employment relationships and supported self-directed professional education. From 2002 onwards the Education Fund has paid only the latter

as indicated by the changing of the fund's name. The fund's activities are financed by payments collected from employers as part of unemployment insurance contributions on earnings. The amount to be paid by employers is ratified by the Ministry of Social Affairs and Health. The expenses of the fund are covered by the Unemployment Insurance Fund.

**Sickness Funds** are insurance funds whose main purpose is payment of sickness benefits. They supplement sickness insurance. The members are usually employees of particular employers or persons belonging to a particular profession. Sickness funds can allow statutory sickness insurance benefits and supplemental benefits to members and families of members. There were 154 such funds at the end of 2004. Funds paying supplemental benefits generally collect membership fees by which most of the benefits are financed. Employers may also participate in the expenses.

**Funeral and Redundancy Relief Funds** are insurance funds whose members are usually employees of particular employers or persons belonging to a particular profession. There were six such funds in 2004.

**The Association of Insurance Funds** acts as an umbrella organ for the various funds, guards their prerogatives and represents them, providing expert advice and supporting the funds. The association is controlled by the Insurance Supervision Authority. At the end of 2004, there were 202 member funds in the association with roughly 230,000 members. Sickness funds numbered 170, pension funds 21 and funeral and redundancy relief funds 11.

### 3.18.3.2.1 *Main data sources*

The main data sources used are the financial statements of social security funds and separate surveys. In 2004, KELA's share of the output of the "Other compulsory social security" industry was roughly 71%, the combined "Unemployment funds" and "Unemployment insurance fund" roughly 14%, others around 12%.

KELA: financial statement, annual report, quarterly report and itemised surveys and the KELA statistical yearbook.

Unemployment Funds: statement of accounts compiled by the Insurance Supervisory Authority and other summaries of unemployment funds accounts.

Unemployment Insurance Fund: statement of accounts and Annual Report.

Education Fund: statement of accounts and Annual Report.

Funeral and Redundancy Relief Funds: statement of accounts for burial and redundancy funds accounting compiled by the Insurance Supervisory Authority.

Sickness Funds: statement of accounts for sickness funds accounting compiled by the Insurance Supervisory Authority.

### 3.18.3.2.2 *Calculation method*

Output of "Other compulsory social security" is calculated through expenditure. The industry's output is the sum of value added and intermediate consumption.

### Intermediate consumption

The output of social security (statutory accident insurance and employee group life insurance) included in market production insurance activities is also counted in social security intermediate consumption. Namely, the public sector is understood to purchase social security managed by the private sector (insurance companies).

### Value added

Consumption of fixed capital is obtained from the capital stock model, not by using depreciation from profit and loss accounts.

The change in the holiday pay debt and meals benefit are included in the earnings of other social security funds. Employers' social contributions are calculated according to the percentage of the premium.

## 3.19 Education (M)

	NACE M	Output	IC	GVA	
1	Basis for NA figures	<b>9100</b>	<b>2640</b>	<b>6460</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>9100</b>	<b>2640</b>	<b>6460</b>	} Conceptual adjustment
4	Reallocations for national accounting	<b>-5</b>	<b>-47</b>	<b>42</b>	
	Reallocations for alignment with ESA 95	<b>-5</b>	<b>-47</b>	<b>42</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>-5</b>	<b>-47</b>	<b>42</b>	
5	National-accounting result (rounded)	<b>9095</b>	<b>2593</b>	<b>6502</b>	} Balancing
6	Macroeconomic reconciliation adjustment				
7	<b>Final NA estimate</b>	<b>9095</b>	<b>2593</b>	<b>6502</b>	

### 3.19.1 Market producers

In Finland production by the private sector in the field of Education (main group M) is scarce especially when compared with public sector production. Market production accounted for nearly 5% of the production value of

education in 2004. Ten years ago this share was good 3%. The public sector is also by far the biggest operator in Health and Social Work (main group N). Other community, social and personal service activities (main group O) is mostly produced on market basis.

In addition to the Education industry (M), eight other accounting industries in included in market producers were formed of industries belonging to main groups N and O. The calculation of output and intermediate consumption for these industries is mainly based on the same data materials. The calculation method used is the same for nearly all accounting industries. Where the calculation differs from the main method, it is mentioned for the industry concerned.

Market production in the education industry includes the production activity of the following 5-digit subindustries: Driving school activities (80410), Folk high schools, adult education centres, music schools and colleges, etc. (80421), In-service training centres (80422), Language schools and centres (80423), Correspondence schools (80424) and Other educational institutions (80429). The production activity of primary, secondary and higher education is treated almost fully in the public sector.

### 3.19.1 *Data sources*

The source used for the industry estimates is data on establishments in the Business Register, the structural business statistics and for the education industry the financial statistics of municipalities and joint municipal authorities. The calculation of employment and labour input is based on the Labour Force Survey data and partly on the Business Register data. Data in the financial statistics of municipalities and joint municipal authorities are used in accounting since not all local authority utilities are yet part of the Business Register and structural business statistics. All these statistics are issued annually. Data sources are exhaustive and reliable, as far as the visible economy is concerned.

In order to ensure the exhaustiveness of industry estimates, the estimates also relied on special reports by Pekka Rytönen Oy, Consultants, about hidden markets in the service industries and reports based on tax auditing data. These reports indicate that in education there are private teachers in the hidden economy who do not pay taxes on income and are not registered for preliminary tax withholding.

#### 3.19.1.2 *Calculation process*

Output at basic prices equals the market output and own-account production total. Intermediate consumption at purchasers' prices is deducted from output at basic prices, resulting in gross value added at basic prices. Any units yielding turnover are included in calculations and those without turnover are counted as belonging to non-profit activities.

#### *Output*

Market output of education is calculated on the basis of the Business Register and the financial statistics of municipalities and joint municipal authorities. Industry turnover is to be found in establishment data in the

Business Register. So-called new form local government utilities owned and maintained by municipalities and joint municipal authorities included in the education industry are here regarded as market producers. Since these local authority utilities are not included in the Business Register, they are added to calculations separately. Their output includes the items: turnover, additions to stocks of finished goods and other profit from business activities. The estimated value of the hidden economy in education is also added to output. Computer software produced on own account is output for own final use.

### *Intermediate consumption*

In calculating intermediate consumption, the ratio between it calculated from structural business statistics data and output in accordance with structural business statistics is utilised. Equally, this ratio is used for market output as calculated above according to the Business Register. The following items were taken from structural business statistics into intermediate consumption: total purchases during the financial period less inventory purchases, purchases of external services, rents less financial leasing rents, and other variable and fixed costs. Financial leasing is derived from the centralised financial leasing calculation of accounting. Data are had on the MNO level of the main industries. Thus data on the education industry are obtained direct. Data on other accounting industries are estimated by the ratio of leasing rents in the structural business statistics.

Intermediate consumption of local authority utilities within education is added to the intermediate consumption of education thus calculated. It is obtained from the sum of items in the financial statistics of municipalities and joint municipal authorities: purchases of services, purchases during the financial period, additions to inventories, rents and other operating costs. The final intermediate consumption is derived by deducting the value of separately purchased software investments.

### **3.19.2 Central government**

Calculation of this industry is explained in Section 3.18.1.

### **3.19.3 Local government**

Calculation of this industry is explained in Section 3.18.2.

### **3.19.4 Non-profit institutions serving households**

Calculation of non-profit institutions in general is explained in Section 3.20.4.

Wages and salaries are based on the Business Register in the education industry. In the national accounts, the schools of non-profit institutions and limited company type schools with no turnover, classified in the corporation section of the Business Register, are counted as non-profit institutions within the education industry. Social security contributions are calculated on the basis of industry percentages.

Consumption of fixed capital is obtained from the capital stock model.

Intermediate consumption in the education industry is derived from the schools expenses register. The National Board of Education maintains a

school expenses register of all schools entitled to State subsidies. The register contains the same data as in the profit and loss statements and balance sheets. The register allows intermediate consumption for the entire industry to be evaluated very accurately.

### 3.20 Health and social work (N)

	<b>NACE N</b>	<b>Output</b>	<b>IC</b>	<b>GVA</b>	
1	Basis for NA figures	<b>16025</b>	<b>4930</b>	<b>11095</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>16025</b>	<b>4930</b>	<b>11095</b>	
4	Reallocations for national accounting	<b>-8</b>	<b>-104</b>	<b>49</b>	} Conceptual adjustment
	Reallocations for alignment with ESA 95	<b>-8</b>	<b>-104</b>	<b>49</b>	
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>-8</b>	<b>-104</b>	<b>49</b>	
5	National-accounting result (rounded)	<b>16017</b>	<b>4856</b>	<b>11144</b>	} Balancing
6	Macroeconomic reconciliation adjustment	<b>30</b>	<b>0</b>	<b>78</b>	
7	<b>Final NA estimate</b>	<b>16047</b>	<b>4826</b>	<b>11222</b>	

#### 3.20.1 Market producers

The main group of Health and social work is divided into three accounting industries: Human health activities (851), Veterinary activities (852) and Social work activities (853). In 2004 market production accounted for 17% in health and for around 9.5% in social work. Ten years previously these figures were 12.5% and 4%.

The data sources for the calculation of these industries are the same as in the education industry. The data of the Household Budget Survey are also utilised in social work. The Household Budget Survey is a sample survey and it is carried out every three to five years. The data sources for the hidden economy are those reports of Pekka Rytönen Oy, Consultants mentioned in connection with education.

### **3.20.1.1 Calculation method**

Output of health and social work activities is calculated by means of the Business Register and structural business statistics data. Turnover, increased on the basis of structural business statistics data, is got from establishment statistics in the Business Register. The estimate for output is calculated from structural business statistics as the total of turnover, additions to inventories, production for own use and other return on business activities. Other return on business activities is taken in relation to the thus obtained output estimate. This coefficient is used to raise turnover in the Business Register to give the market output.

Market output concerning social work activities calculated in the manner presented above is supplemented with the output of private day care childminders found from Household Budget Survey data. The data include purchases for private family day care and other care system services.

In veterinary activities the turnover in the Business Register was directly used as market output. Further, the output of these three industries also includes the value of computer software produced for own use. Data on them derive from the centralised calculation of accounting. In addition, the value of the hidden economy estimated in dental care activities in health and in child day care included in social work is added to output.

The calculation of intermediate consumption is similar to that of education explained in Section 3.19.1.2. Intermediate consumption of private day care minders is added to intermediate consumption of social work. Pekka Rytönen Oy, Consultants, has prepared a special report on this (25% of output).

### **3.20.2 Central government**

Calculation of this industry is explained in Section 3.18.1.

### **3.20.3 Local government**

Calculation of this industry is explained in Section 3.18.2

### **3.20.4 Non-profit institutions serving households**

Non-profit institutions serving households are found in the following industries: Road development (6302), Research and development (73), Education (80), Health and social work (85), Activities of membership organisations (91), and Recreational, cultural and sporting activities (92).

The common calculation features of these industries are shown here. The particular features of each industry are shown in connection with each of the industries.

## *Value added*

The wages and salaries of non-profit activities serving households are based mainly on establishment data in the Business Register. Employers' social contributions are calculated according to the percentages of the appropriate employer for earnings in the industry. Consumption of fixed capital is obtained from the national accounts' capital stock model.

## *Intermediate consumption*

Intermediate consumption is estimated through earnings in the industry. A more relevant method would be to relate the different variables of the account to output, but this is very awkward because output in non-profit activities is calculated using costs. Intermediate consumption is calculated in such a way that, based on the Business Register, an effort is made to take a sample of organisations that are most central and most heterogeneous from an industry viewpoint. The intermediate consumption of organisations in the sample is calculated from their profit and loss statements. Intermediate consumption is then raised to the level of the industry as a whole in the relation of the sample earnings to earnings in the industry as a whole.

The method is not without its problems. An effort was made regarding the sample organisations to allow for as wide a coverage as feasible and heterogeneity in the industry. In the instances where the industry has just a few large organisations and is fairly homogeneous, the sample's coverage is better. In certain industries, this is much harder as they are so heterogeneous with many small organisations. In such cases, coverage is unfortunately not as wide. A suitable intermediate consumption in relation to earnings was sought by including as many kinds of organisations as possible in the sample.

The calculation is done by first adding together the various expense components, based on the profit and loss statements of the organisations and deducting wages and salaries and employers' additional expenses. Next, the intermediate consumption appropriate to each organisation is added up (sample, total). Finally, the sum is raised by a coefficient (cf. coefficient item) found by calculating the relation of earnings in the sample to earnings in the industry as a whole. Besides being applied to intermediate consumption, this method can be also applied to other income and expense components.

Intermediate consumption is calculated in the way described for the following industries: Research and development (73), Human health activities (851), Social work activities (853), Trade unions (911), Activities of other organisations (9139) and Recreational, cultural and sporting activities (92). The method was not used in industries: Road development (6302), Education (80) and Activities of religious organisations (9131). The methods of such organisations are described in conjunction with them.

The source for research and development is the profit and loss statement of the Finnish Institute of Occupational Health. As its share of earnings for the entire industry was roughly 56.5%, the sample can be regarded as fairly exhaustive. As for trade unions, the exhaustiveness of the sample<sup>1</sup> is roughly

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<sup>1</sup> The sample contains the following organisations: the Confederation of Unions for Academic Professionals in Finland (AKAVA) the Confederation of Finnish Trade Unions (SAK), the Metalworkers' Union, the

22% of earnings in the industry. This is low but cannot be much higher as this industry has many small organisations. In selecting the organisations, efforts were made to take the diversity of organisations in the industry into account.

In calculating or assessing intermediate consumption for other organisations, the problem is that organisations in the industry are fairly small and mixed as a rule, making it difficult to enlarge the sample sufficiently. The exhaustiveness of the sample<sup>2</sup> is only 4%. It is extremely tedious to enlarge the sample to a much higher level. For recreational, cultural and sporting activities, the exhaustiveness of the sample is high, as much as 57%. In calculating the sample<sup>3</sup>, theatre statistics and the profit and loss statements of various cultural and sports organisations were used. Theatre statistics are published and maintained for all theatres in Finland by the Theatre Information Centre. The statistics contain an abundance of financial statements.

The exhaustiveness of the sample in the health care services<sup>4</sup> was roughly 60% and in the social services<sup>5</sup> about 13%. The samples include six or seven of the largest organisations in the sector in terms of wages and salaries.

### Output

In non-profit activities, output is the sum of value added and intermediate consumption combined.

### 3.21 Other community, social and personal service activities (O)

	NACE O	Output	IC	GVA	
1	Basis for NA figures	<b>8597</b>	<b>4150</b>	<b>4447</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result	<b>8597</b>	<b>4150</b>	<b>4447</b>	} Conceptual adjustment
4	Reallocations for national accounting	<b>225</b>	<b>-42</b>	<b>267</b>	

Union of Finnish Foresters, the National Union of Public Health Nurses (STHL), the Paper Workers' Union, the Construction Trade Union, the Trade Union for the Municipal Sector (KTV) and the Finnish Confederation of Salaried Employees (STTK).

<sup>2</sup> The sample contains the following organisations: the Social Democratic Party of Finland, the Centre Party, the National Coalition Party, the Green League, the Student Union of Helsinki University, the Student Union of Helsinki University of Technology, the Student Union of Tampere University, the Student Union of Kuopio University, the Sibelius Academy Student Union, the Student Union of the Helsinki School of Economics and Business Administration, the Student Union of Jyväskylä University, the Finnish Cultural Foundation and the Foundation for Finnish Inventions.

<sup>3</sup> The sample contains the following organisations: All non-profit corporation theatres (theatre statistics), the Finnish Jazz Federation, the Finnish Swimming Association, the Finnish Boxing Association, the Football Association of Finland, the Aeronautical Association of Finland, the Finnish Orienteering Association, the Finnish Bandy Association, the Finnish Ice Hockey Association, the Worker's Archive Trust, the Finnish Film Foundation, the Finnish Basketball Association, the Finnish Skiing Association, the Finnish Baseball Association and museum statistics.

<sup>4</sup> The Finnish Red Cross, the Finnish Student Health Service, the National Association of the Disabled, the Finnish Rheumatism Foundation, the Disabled War Veterans' Association of Finland and the Mannerheim League for Child Welfare.

<sup>5</sup> The Rinnekoti Foundation, the Helsinki City Foundation for nursing and old age homes, Friends of the Young Association, the Finnish Association for Mental Health, the A-Clinic Foundation, Finnish Association of the Deaf and the Finnish Federation of the Visually Impaired.

	Reallocations for alignment with ESA 95	<b>225</b>	<b>-42</b>	<b>267</b>	} Conceptual adjustment
	Adjustments not affecting GDP				
	Adjustments affecting GDP	<b>225</b>	<b>-42</b>	<b>267</b>	
5	National-accounting result (rounded)	<b>8822</b>	<b>4108</b>	<b>4714</b>	} Balancing
6	Macroeconomic reconciliation adjustment	<b>70</b>	<b>0</b>	<b>70</b>	
7	<b>Final NA estimate</b>	<b>8892</b>	<b>4108</b>	<b>4784</b>	

### 3.21.1 Market producers

Other community, social and personal service activities (main group O) consists of a great variety of activities. Five accounting industries are formed of the main group: Sewage and refuse disposal, sanitation and similar activities (90), Activities of business, employers' and professional organizations (911), Recreational, cultural and sporting activities industry (92), Washing and dry-cleaning of textile and fur products (9301), and Other personal service activities (9309). In 2004 market production accounted for around 41% in industry 911 and for roughly 63% in industry 92. Output in the other industries is totally based on markets.

The data sources used are the previously mentioned structural business statistics and the Business Register. In addition, data in the financial statistics of municipalities and joint municipal authorities are used for Sewage and refuse disposal, sanitation and similar activities. Not all data on these are included in the registers mentioned. In calculating industry 911 use is also made of accident insurance statistics as comparative data. The calculation of industry also requires financial statement data from VEIKKAUS (Finnish Lottery Company), RAY (Finland's Slot Machine Association) and Fintoto (totalizator betting). The data sources for the hidden economy are the earlier mentioned reports of the consultancy.

#### 3.21.1.1 Calculation method

The calculation method for industries other than business and employers' organisations is similar as that of health and social work (Section 3.20.1.1). The starting point for calculating business and employers' organisations is establishment data on wages and salaries in the Business Register. The proportion of intermediate consumption to wages and salaries is presumed to remain stable.

Output of sewage and refuse disposal, sanitation and similar activities (90) derived with the help of structural business statistics and the Business Register is supplemented with output of environmental management, i.e. sewage and refuse disposal, sanitation and similar activities included in water supply plants of municipalities and joint municipal authorities. This differentiation is made in the calculations of the Collection, purification and distribution of water industry. Intermediate use is also derived from the calculation of the above-mentioned data materials. According to the

previously mentioned report, this industry also comprises the hidden economy, similarly as the industry Other personal service activities (9309).

The returns generated by, the lottery taxes paid by and the lottery winnings paid to gamblers by VEIKKAUS (Finnish Lottery Company), RAY (Finland's Slot Machine Association) and Fintoto (totalizator betting) are deducted from the register data used in the calculation of the output of recreational, cultural and sporting activities. Thus we have the output of these institutions at basic prices. The intermediate consumption of the production of writers is still added to the intermediate consumption of this industry.

According to the above-mentioned report, there is the hidden economy in the industries Recreational, cultural and sporting activities and Other personal service activities. According to the report, the hidden economy is present in sporting and recreational activities and in hairdressing activities. In addition, the value of prostitution has been evaluated.

### **3.21.2 Central government**

The calculations are explained in Section 3.18.1.

### **3.21.3 Local government**

The calculations are explained in Section 3.18.2.

### **3.21.4 Non-profit institutions serving households**

#### **3.21.4.1 Trade unions (911)**

Calculation of trade unions is explained in Section 3.20.4.

#### **3.21.4.2 Religious organisations (9131)**

Data on the earnings of religious organisations are available from a number of sources: KELA, the Business Register and parish statistics of the Evangelical Lutheran Church. Statistics on parish economy are maintained by the ecclesiastical government and cover comprehensively most financial statement data. The material is register based. The drawback is that it includes neither the Orthodox Church nor other religious organisations, naturally. The earnings given by KELA are regarded as a more exhaustive and reliable source. The Evangelical Lutheran Church pays nearly 85% of wages and salaries in the industry.

Employers' social contributions are based on percentages paid to religious organisations.

Consumption of fixed capital is obtained from the capital stock model.

Intermediate consumption for religious organisations is calculated based on the financial statistics of parishes. The register can be considered exhaustive from an industry standpoint. Intermediate consumption is raised to the level of the entire industry in the same proportion as earnings.

#### **3.21.4.3 Other organisations (9139)**

Calculation of other organisations is shown in Section 3.20.4.

### 3.21.4.4 Recreational, cultural and sporting activities (92)

Calculation of this industry is explained in Section 3.20.4.

## 3.22 Activities serving households (P)

	<b>NACE P</b>	<b>Output</b>	<b>IC</b>	<b>GVA</b>	
1	Basis for NA figures	<b>105</b>		<b>105</b>	} Data valid.
2	Allowances and adjustments				
3	Balance-sheet result				} Conceptual adjustment
4	Reallocations for national accounting				
	Reallocations for alignment with ESA 95				
	Adjustments not affecting GDP				
	Adjustments affecting GDP				
5	National-accounting result (rounded)				} Balancing
6	Macroeconomic reconciliation adjustment	<b>3</b>		<b>3</b>	
7	<b>Final NA estimate</b>	<b>108</b>		<b>108</b>	

In addition to wages and salaries, employers' social contributions are paid in the industry.

No intermediate consumption or investments occurs in the industry because any intermediate products required are regarded as direct final consumption expenditure by households, so output and gross value added equal compensation of employees.

### Supply

The supply of labour in industry 95 is available from the Labour Force Survey and to a limited extent from household surveys (Survey on Income and Living Conditions EU-SILC, Household Budget Survey HBS). In addition, the Accident Insurance data of the Federation of Accident Insurance Institutions contains information on employers' accident insurance payments and paid salaries in industry 95 as reported by the insurance companies. Register-based employment statistics are not reliable with regard to the employment of domestic staff.

The estimate of wages and salaries is calculated by multiplying the LFS hours worked by average wages. The estimated average wage level was eight euros per hour in 2003 and 8.1 euro in 2004. Wages per hour were derived from the Accident Insurance Data purged from certain occupations. For some reason the original data included workers in agriculture, construction and transportation in the industry 95. After these were removed, the total wages and salaries were about half of the original figure. This total is one alternative to estimate the value of the services of domestic staff employed by households.

The LFS occupations in the industry 95 are mostly related to child care. In the LFS, the occupations purged from the Accident Insurance data (repairmen etc.) are correctly coded to relevant industries. Using the LFS is more consistent with the sources used in the other industries and sectors as well.

### **Demand**

To evaluate the demand for the services of employees of private households, we utilise the research report on the use of domestic help tax credit (Niilola et. al., 2005). Domestic help credit is a tax deduction which requires a paid remuneration to the private sector for such services as cleaning, repairing your home or taking care of an aged person or a child in your home. The services may be provided by enterprises or private households. The new deduction system was introduced in 2000 and it has been expanded after that.

The number of persons and households entitled to domestic help credit is known from annual tax registers and/or micro income statistics. Based on a survey they conducted, Niilola et. al. estimate that 20 per cent of those entitled to credit have bought the services from another household and 80 per cent from private enterprises. The employees of the enterprises should be included in the employment of the relevant industry (e.g. construction, cleaning etc.). Of those using the services of other households, seventy percent have bought renovation and repair services. These services, even if supplied by private households and not enterprises, are included in the estimates of construction industry. Making the assumption that six percent ( $0.20 \times 0.30$ ) of the households have made the deduction because of having employees to do cleaning, gardening, nursing and child care, we get down to 7 243 households.

Simply multiplying the households using tax deduction (7 200 households) with average wages and hours used in other estimates gives a figure close to 100 million euros. Household Budget Survey 2001 also included questions on the use of household services. The use of services provided by private employees cannot be separated from those provided by enterprises. The

point estimate of the use of household services was 66 million euros in 2001 and this comes mostly from cleaning. If a large fraction of this is assumed to be services provided by private enterprises, the HBS estimate becomes very small compared to other estimates.

The supply and demand in terms of numbers of employees and households is summarised in Table 30b. Given the different definitions and uncertainties involved in the figures, we conclude that the LFS figures can be used as the basis for estimating the output of the industry.

**Table 30b. Assessment of supply and demand of domestic staff in 2003**

<b>Supply</b>	<b>Employees/persons in industry 95</b>	<b>Source</b>
Employees in industry 95, annual average of monthly estimates	4610	Labour force survey 2003
Persons during the year with employment in industry 95	8058	EU-SILC 2003
<b>Demand</b>	<b>Number of households</b>	<b>Source</b>
Number of persons with domestic tax credit	143 953	Tax administration
Number of households with domestic tax credit	123 753	Tax administration
Number of households with domestic tax credit and employer of another household	24 142	Estimated as 20 % of above
Number of households with domestic tax credit and employer of cleaners, nannies and gardeners etc.	7 243	Estimated as 30 % of above

### **Hidden work**

The estimate of unregistered household work is based on the Niilola et. al. research on the use of domestic tax credit. The survey they conducted indicated that the amount of hidden work decreased significantly after the introduction of the domestic tax credit in 2000.

### **Output**

Adding up the estimates of hidden work with the legal figures gives the total number of employees, hours worked and wages and salaries in the industry. The amount of paid employers' social contributions is added to wages and salaries using the social contribution percentages. The compensation of employees equals the output and gross value added because intermediate products are regarded as direct final consumption expenditure of the households demanding the services. The proposed new estimate is approximately 35 percent of the old estimate.

The table below gives details of the calculations for year 2003.

**Table 30c. Output of industry 95 in 2003 (new method).**

Estimate	Source
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Employment	4,600	Labour Force Survey
Hidden work (18 %)	800	Niilola et. al. (2005)
Total employment	5,400	
Hours worked per employee	1,457	LFS
Hours worked	6 702 234	LFS
Hidden hours worked	1 165 606	LFS, Niilola et. al.
Total hours worked	7 867 800	
Wages per hour, euro	8,0	Accident Insurance data (purged)
Wages and salaries	53 617 871	LFS, Accident Insurance data
Hidden wages and salaries	9 324 847.2	LFS, Accident Insurance data, Niilola et. al.
Total wages and salaries	62 942 400	
Employers' social contributions	11 428 113	Percentage of legal wages and salaries
Output = gross value added = compensation of employees	74 370 513	

There are several reasons, why the value of the services of employees of private households is so low in Finland:

- 1) The childcare in Finland is organised by municipalities (based on law), so there is hardly any privately employed personnel working on that.
- 2) In order to increase use of domestic services (aiming to decrease unemployment and use of grey labour) we have quite new legislation about tax reductions for officially paid household work (for example, renovations and cleanings). Since it is easier for the households to use companies or self-employed than private employees, there are several small companies or self-employed for this kind of household work (especially in cleaning. (If a household uses this kind of service (enterprise), it gets a receipt to be attached to the tax form, which is much simpler than employing a private employee directly).
- 3) Municipalities have an obligation to arrange help for disabled and old persons living at home (nurse, cleaning personnel, food services), so households do not employ those either.
- 4) Income distribution in Finland has been quite equal. So we have not so many rich families which could hire servants. Households have also been cramped for room: compared to other countries dwellings in Finland have been quite small without space for servants.

**Table 31: Output of household services, 1998-2004, EUR million**

	1998	1999	2000	2001	2002	2003	2004
<b>Output = value added = compensation of employees</b>	55	60	55	52	57	77	105

### 3.23 *Extra-territorial organisations and bodies (Q)*

Extraterritorial organisations and bodies and foreign missions do not belong to the economic territory of Finland. These include, besides foreign missions, the United Nations' WIDER Institute and the Nordic Investment Bank.

### 3.24 Taxes on products, excluding value-added tax

Product taxes comprise value-added-type taxes (D211), import duties (D2121), taxes on imports excluding VAT and import duties (D2122) and other product taxes (D219). Other taxes on imports excluding VAT and import duties occurred in Finland until 1994. Value-added tax is explained in Section 3.25.

The key data source is the Financial Statement and Report of Central Government, which adequately cover the budget. Central government tax revenue and revenue accruing from chargeable activities can be separated through account allocation in central government accounting. In central government accounting, tax revenues are recorded in tax accounts separately according to tax category, while various sales revenues are recorded in the accounts as output of activities subject to fees in accordance with the chart of accounts. Central government output of activities subject to charges consists of operations which are determined to be chargeable in the Act on the Charge Criteria of the State (150/1992). According to the Act, goods produced by state authorities and services that are performed on request or commissioned are chargeable. Also chargeable are decisions for which an application has been made, usage rights, conferring of other temporary rights and other activities that follow from the recipient's actions. Actions are free of charge the performance of which is determined not to bear directly on a private person, enterprise or other clearly definable group. Also free of charge are actions whose purpose is to safeguard a person's livelihood and various forms of instruction, guidance, advice and information given by state authorities, when entailing only minor expense. The Act on the Charge Criteria of the State applies both to actions in virtue of their office taken by the state authorities, goods produced by the state, services and other activity and actions governed by public law, the demand for which is based on a law or statute and which the authority has an exclusive right to perform. No more exact definition of the goods and services meant is found in the Act.

Among the service charges collected by the state are decisions made by police authorities relating to driving licences and passports granted and piloting fees collected by the Finnish Maritime Administration for pilot services. The public sector has income deriving from payments for other non-market output (P139).

The accompanying tables show examples of service charges collected by central and local government.

**Table 32: Key central government separate income items in 2004, EUR million**

	P11	P131
Defence administration's construction utility	122	
Operation of universities	237	
Finnish Maritime Administration	82	
Technical Research Centre of Finland	79	
<b>Key items total</b>	<b>519</b>	
<b>Aggregate level in 2004</b>	<b>1 331</b>	<b>90</b>

**Table 33: Key separate income items in local government sector, EUR million in 2004**

<b>Municipalities</b>		<b>TOL</b>	<b>P11</b>	<b>P131</b>
Office space and rental services	Internal sales income	751	163	
Payments	Rent income	751	408	
Internal services	Internal sales income	751	490	
Children's day care	Payments	853		151
Institutional care of the elderly	Payments	853		141
Basic health care	Payments	851		161
<b>TOTAL</b>			<b>1 061</b>	<b>453</b>
<b>Joint municipal authorities</b>				
Specialist nursing care	Sales income from joint municipal authorities	851	231	
Specialist nursing care	Other sales income	851	107	
Specialist nursing care	Payments	851		191
<b>TOTAL</b>			<b>338</b>	<b>191</b>
<b>Key items total</b>			<b>1 399</b>	<b>644</b>
<b>Aggregate level in 2004</b>			<b>4 214</b>	<b>1 655</b>

**Import duties** include, besides ordinary import duties, duties on agricultural products for which data are available from the National Board of Customs.

Import duty accounts have been rendered to the European Union since 1995.

**Other taxes on products** consist of pharmaceutical fees, excise duties on manufactured tobaccos, duties on alcoholic beverages, duties on soft drinks, energy tax, tax on insurance premiums, rail tax, car tax, transfer of assets tax, lottery tax, oil waste tax, retained earnings from pools and lotteries of VEIKKAUS (Finnish Lottery Company), of money lotteries and of the Finnish Slot Machine Association, other revenue from taxes and tax refunds. Each of the above items is allocated a specific subitem in the final central government accounts. Entries of most subitems are marked in the account group "901 Other taxes and tax comparable charges" but only items belonging to each particular account group are selected from other tax revenues (11.19.09), the State's share of retained earnings from pools and lotteries (12.29.88) and from tax refunds due to tax relief (28.99.62) and recorded in other product taxes. Additionally, sanctions for defaulting on taxes (12.39.02) are recorded under this economic activity. A timing adjustment for transferring the January accumulation of tax revenues to the previous calendar year is made in respect of duties payable on manufactured tobaccos, alcoholic beverages, fuel, transfer of assets tax, and lottery tax. Recorded as "Other taxes on products" are premiums for fire protection, national emergency supplies and oil pollution compensation from revenues in government off-budget activities.

Product taxes levied by the Government of Åland are recorded as other product taxes collected by local government (incl. pharmaceutical fees and lottery taxes).

**Table 34: Revenue from various kinds of taxes on products, EUR mil.**

Product taxes			year				
sector	ESA code	name	2000	2001	2002	2003	2004
S1311	TRD211	Value-added tax/Turnover tax	9615.07	9774.07	9896.50	10269.00	10736.00
		VAT for which account rendered to EU incl. UK rebate (deduction item from the state)	-545.43	-578.40	-428.50	-474.00	-337.00

		Income recognition on VAT to the Social Insurance Institution	403.65	403.65	696.00	1000.00	1000.00
		VAT paid by municipalities			1088.00	1186.00	1213.00
		VAT accounting for the zero subitem	1.04	0.17	-0.50	0.00	0.00
		Recoverable VAT returns	849.21	939.86			
		UK rebate	71.00	151.00	139.45	156.00	133.00
		TRD211 total	10394.53	10690.35	11390.95	12137.00	12745.00
	TRD2121	Other tax revenues	-8.29	-2.19		1.00	1.00
		TRD2121 total	-8.29	-2.19		1.00	1.00
	TRD214A	Duties on alcoholic beverages	1239.07	1294.64	1348.20	1363.00	1030.00
		Pharmaceutical fees	85.15	93.24	103.10	108.00	110.00
		Duties on cars and motorcycles	1058.66	922.21	1022.90	1207.00	1235.00
		Duties on manufacture of certain beverage packages					
		Duties on fuel	2582.09	2671.82	2804.40	2832.00	2904.00
		Tax returns (all)	-1.67	-0.89	-3.20	-9.00	-11.00
		Sanctions for default on taxes on products	-0.98	1.31	5.10	3.00	1.00
		Duties on manufactured tobacco	561.19	598.90	604.00	593.00	598.00
		Premium for national emergency supplies	46.35	48.44	49.50	50.00	48.00
		Duties on soft drinks	31.69	33.05	34.80	37.00	39.00
		Oil waste tax	3.26	3.11	3.60	3.00	3.00
		Oil pollution compensation premiums	5.40	5.38	5.70	9.00	10.00
		TRD214A total	5610.23	5671.21	5978.10	6196.00	5967.00
	TRD214B	Stamp taxes	-19.90	2.25	1.50		
		TRD214B total	-19.90	2.25	1.50		
	TRD214C	Transfer of assets taxes	421.38	330.56	339.50	337.00	429.00
		TRD214C total	421.38	330.56	339.50	337.00	429.00
	TRD214F	Lottery taxes (on profits)	79.49	91.09	108.50	120.00	128.00
		Retained earnings/Finnish Slot Machine Association	324.60	346.30	377.30	401.00	406.00
		Retained earnings/Veikkaus and lotteries	378.64	376.99	355.60	370.00	376.00
		TRD214F total	782.73	814.38	841.40	891.00	910.00
	TRD214G	Fire protection premium	5.97	5.89	6.50	7.00	7.00
		Insurance premium tax	337.13	355.33	373.70	396.00	428.00
		TRD214G total	343.10	361.22	380.20	403.00	435.00
	TRD214H	Rail tax				13.00	16.00
		TRD214H total				13.00	16.00
	TRD214L	Other tax revenues	-1.46	0.19	0.30	1.00	6.00
		TRD214L total	-1.46	0.19	0.30	1.00	6.00
		S1311 total	17522.32	17867.97	18931.95	19979.00	20509.00
S1313	TRD214A	Pharmaceutical fees	0.50	0.50	0.50	0.00	0.00
		TRD214A total	0.50	0.50	0.50	0.00	0.00
	TRD214F	Lottery taxes (on profits)	0.67	0.84	1.70	3.00	3.00
		TRD214F total	0.67	0.84	1.70	3.00	3.00
		S1313 total	1.18	1.35	2.20	3.00	3.00
S212	TRD211	VAT for which account rendered to the EU incl. UK rebate (deduction item from the state)	545.43	578.40	428.50	474.00	337.00
		UK rebate	-71.00	-151.00	-139.45	-156.00	-133.00
		TRD211 total	474.43	427.40	289.05	318.00	204.00
	TRD2121	Import duties for which account rendered to the EU	129.49	119.92	101.00	101.00	126.00
		TRD2121 total	129.49	119.92	101.00	101.00	126.00
	TRD214A	Duties on sugar confectionery to the EU	9.10	6.90	5.30	3.00	4.00
		TRD214A total	9.10	6.90	5.30	3.00	4.00
		S212 total	613.02	554.21	395.35	422.00	334.00

### 3.25 Value-added tax

The value-added tax accruing is obtained by adding value-added tax from the Financial Statement and Report of Central Government (in 2002, Subitem 11.04.01), value-added tax recorded as revenue to the Social Insurance Institution, and value-added tax paid by municipalities, returned to them by central government, and which is netted from the value-added tax item in the Financial Statement and Report of Central Government. The data

source for value-added tax paid by the municipalities is the amount of value-added tax reimbursed by central government, to be found in municipal financial statistics. Before 2002, central government recovered the value-added tax reimbursed to municipalities, so that the value-added tax paid by them was truly part of central government revenues. At the start of 2002, this practice was discontinued. According to Commission Decision 1999/622, the reimbursement in question is not tax deductible in the national accounts. Hence, it is recorded as value-added tax and is shown as transfer from central government to the municipalities amounting to the value-added tax reimbursement flow.

Part of the value-added tax is shown as collected by the EU. The amount of EU value-added tax accruing is to be found in the Financial Statement and Report of Central Government under "Finland's remittance payments to the European Union" (in 2002, Item 28.90.66). The item is deducted from the value-added tax accruing to central government.

Finally, a timing adjustment is made to the value-added tax accruing to central government (Item 11.04.01), by which value-added tax revenues for January and February are allocated to the previous calendar year.

### 3.26 *Subsidies on products*

While there are no import subsidies (D.311) on products in Finland, Other subsidies on products (D319) exist, paid by the European Union, the State and some local authorities. The main data sources for subsidies on products paid by the European Union and central government are consolidated accounting data and the Financial Statement and Report of Central Government and, for those paid by local authorities, the annual reports and accounts of the latter.

While subsidies paid by the European Union accumulate in practice through the State of Finland, subsidies related to agricultural policy are treated in the national accounts as paid by the European. The combined total of subsidies paid by the European Union and the State are to be found in final central government accounts, which distinguish between the subsidies. The methods in accordance with Eurostat decision (15 February 2005) are applied to the treatment of EU transfers.

Subsidies on products, according to final central government accounts include part of the national subsidy for agriculture and horticulture (Subitem 30.12.41) and European Union income support (30.12.43). The other subsidies in these subitems are classed as Other subsidies on production (D39). The share-out among subsidy groups is done by the Ministry of Agriculture and Forestry, based on special reports. Also counted as product subsidies are mass transit service purchases and development (31.60.61). Only the above subitems recorded in the business bookkeeping account "8230 Operational economy expenditure for business" are treated as subsidies on products. In addition, any export subsidies paid by the Intervention Fund of Agriculture and any programme related subsidies found when balancing Fund accounts are classed as subsidies on products. If necessary, timing adjustments are made to subsidies on products recorded in accounting records on a cash-basis principle.

Of the above subsidies on products, the income subsidies and subsidies paid by the European Agricultural Intervention Fund are recorded as paid by the EU.

Subsidies on products paid by local authorities are mainly tariff subsidies on tickets for local authority mass transit services (Helsinki, Tampere, Turku). The item also contains transport subsidies paid to enterprises by the Government of Åland.

**Table 35: Subsidies paid separately on products, EUR mil.**

<b>SUBSIDIES ON PRODUCTS, TOTAL</b>					
<b>Name</b>	<b>Subitem</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
National subsidy for agriculture and horticulture	<b>302040</b>	<b>394</b>	<b>398</b>	<b>395</b>	<b>419</b>
Purchase and development of mass transit services	<b>316061</b>	<b>59</b>	<b>61</b>	<b>62</b>	<b>63</b>
Price subsidy for pilotage	<b>313251</b>				<b>3</b>
<b>Entry differences (cash, accrual principle):</b>					
National subsidy for agriculture and horticulture (EU)	<b>302040</b>	<b>14</b>	<b>-16</b>	<b>+14</b>	<b>-2</b>
Other national subsidies (from various items)	<b>various subitems</b>				
<b>Entry differences (total)</b>		<b>14</b>	<b>-16</b>	<b>14</b>	<b>-2</b>
<b>STATE: Subsidies on products, total</b>		<b>467</b>	<b>443</b>	<b>471</b>	<b>483</b>
<b>LOCAL AUTHORITIES: To cover deficits of mass transit companies</b>		<b>112</b>	<b>114</b>	<b>109</b>	<b>106</b>
<b>FOREIGN COUNTRIES:</b>					
CAP Subsidies (excluding fields lying fallow)	<b>378</b>	<b>408</b>	<b>378</b>	<b>440</b>	
Intervention Fund of Agriculture	<b>88</b>	<b>89</b>	<b>93</b>	<b>93</b>	
<b>FOREIGN COUNTRIES, TOTAL</b>	<b>465</b>	<b>497</b>	<b>471</b>	<b>533</b>	
<b>SUBSIDIES ON PRODUCTS, TOTAL</b>		<b>1 044</b>	<b>1 054</b>	<b>1 051</b>	<b>1 122</b>

## Chapter 4 The income approach

### 4.0 GDP by the income approach

The accompanying table shows Finland's GDP divided into income revenues. Compensation of employees amounts to almost half of GDP and gross operating surplus represents roughly 40%.

**Table 36: GDP by income revenues in 2004.**

<i>GDP by income revenues in 2004</i>	EUR mil.	%
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1 Wages and salaries	58 672	38.6
2 Employers' social contributions	14 626	9.6
3 Operating surplus / Mixed income	38 092	25.1
4 Taxes on production and imports	21 287	14.0
5 Subsidies	2 816	1.9
6 Consumption of fixed capital	22 074	14.5
<b>7 GDP at market prices (1+2+3+4+5+6+7)</b>	<b>151 935</b>	<b>100</b>

## 4.1 Reference framework

The income approach denotes calculation of GDP as the addition of its various components, consisting of compensation of employees, gross operating surplus (including consumption of fixed capital) and other taxes on production less other subsidies on production.

In Finland's national accounts, GDP is not calculated using the income approach because gross operating surplus is not reliable enough as an independent estimate. Gross operating surplus is calculated as a residual in market production, when other income components have been deducted from gross value added.

In this chapter, the calculation of the various components of GDP will be described. They are calculated using the same industry and producer type classification as was used for gross value added in the production approach.

## 4.2 Valuation

Economic transactions are recorded on the accrual principle, not on the cash-basis principle. Wages and employers' social contributions are recorded for the time when the work is performed and the compensation of employee obligation is in effect.

## 4.3 Transition from private accounting and administrative concepts to ESA 95 national accounts concepts

The concept of wages and salaries in business accounting and various source statistics is generally the same as in national accounting. An obvious exception is benefits in kind. In the national accounts, any untaxed benefits in kind (which in business accounting are not always included in wages and salaries, but may be part of other business activities expenses or non-wage labour costs) are treated as benefits in kind. On the other hand, the employee stock options, which in some source materials are included in wages and salaries, do not count as benefits in kind from the standpoint of the national accounts.

Employee stock options are of two kinds: traditional options and synthetic options. In the former, the enterprise offers employees the option of purchasing an agreed number of company shares at an agreed price within an agreed time period. The worth of the option to employees is the difference between the agreed price of the share and its price at the time the option is exercised. If the difference is negative, the option is of no value. In traditional options, the sales profit is drawn from the market. Consequently, in the national accounts, traditional options are also treated as sales profits and not as wages and salaries.

In synthetic options, employees have no realistic possibility of buying the shares. The enterprise pays the difference between the issued price of the shares and their market value. Synthetic options weaken the business's profit and as such are to be interpreted as bonus income tying the business's shares to the stock exchange. This is also the key difference from the standpoint of the national accounts. Since wages and salaries must have a real economy pay source, synthetic options are regarded as earnings in the national accounts.

The equivalent concept in business accounting, and in many source materials, to employers' social contributions is non-wage labour costs, which are not usually differentiated by payment type. In the national accounts, contributions of this kind are usually calculated by industry on a so-called percentage basis (cf. Section 4.7.2.2.). In such a case, the difference between non-wage labour costs and the employers' compulsory contributions calculated by the percentage method is recorded as voluntary social contributions.

Consumption of fixed capital is calculated in national accounts entirely by means of the capital stock model (cf. Section 4.12.) and business accounting write-offs are not used at all.

#### 4.4 Role of direct and indirect estimation methods

Compensation of employees is calculated in Finland's national accounts for many industries by the direct estimation method, i.e. there are aggregate data available. Such data consist of structural business statistics, the Business Register, the local government financial statistics, consolidated accounting data and the Financial Statement and Report of Central Government, banking statistics and insurance corporation statistics. Some industries use an indirect estimation method, such as price by volume type estimates in which the average hourly pay is multiplied by the number of hours worked. The attached table shows a summary of the data sources and methods used to calculate wages and salaries.

**Table 37: Wage and salary main data source or calculation method for industries.**

<b>Industries:</b>	<b>Wage and salary data source or calculation method:</b>
A 01 Agriculture, etc.	Agricultural enterprise and income statistics, etc.
A 02 Forestry	Price x amount from various sources
B Fishing	Business Register
CDE Manufacturing	Structural business statistics
F 4501 Building construction	Price x amount from various sources
F 4502 Civil engineering work	Structural business statistics, local government financial statistics
F 4509 Construction service activities	Business Register
G Wholesale and retail trade	Business Register
H Hotels and restaurants	Business Register
I Transport, storage and communications	Business Register
J 65 Financial intermediation	Banking statistics
J 66 Insurance	Insurance corporation statistics
J 67 Activities auxiliary to financial intermediation and insurance	Sample of profit and loss statements of businesses
KA Real estate activities	Price x amount from various sources
KB Business services	Business Register

M Education	Business Register
N Health and social work	Business Register
O Other community, social and personal service activities	Business Register
General government and non-profit institutions:	
Central government	Financial Statement and Report of Central Government
Local government	Financial statistics of municipalities and joint municipal authorities
Social security funds	Insurance corporation statistics and financial statements
Non-profit institutions	Business Register

As will be clear from Section 4.7.2.2, employers' social contributions by industry and payment type are generally calculated by the so-called percentage payment method which may be regarded as an indirect method, but total social contributions are calculated using the direct method.

Consumption of fixed capital is calculated by means of the capital stock model, which is an indirect method.

Other taxes on production and other subsidies on production are obtained from the aggregate materials, i.e. the calculation method is direct.

## 4.5 Role of benchmarks and extrapolations

Benchmarks and extrapolation have been used to calculate wages and salaries in some industries. This affects part of the forestry, building construction and real estate activities. The calculation of such areas is described in more detail in Section 4.7.1.2.

## 4.6 Main approaches taken with respect to exhaustiveness

### 4.6.1 Wages and salaries

Two problem areas arise in ensuring the exhaustiveness of wages and salaries: hidden wages and untaxed benefits in kind.

The valuation of hidden wages is based principally on reports produced by Pekka Rytönen Oy Consultants in 1995-1998, which in turn are based on tax auditing data from the tax authorities. A report was issued for each year and the value of the hidden economy is shown by industry (hidden wages, extra income, disguised distribution of dividends). The hidden economy is evident to some extent in agriculture, manufacturing, construction, wholesale and retail trade, hotel and restaurant activities, transport, business services and in certain other services.

In this calculation method, income undisclosed in tax audits (additions to the income of a business) is related by industry to the turnover of the audited cases. The share of undisclosed income in the turnover of the audited cases thus obtained is multiplied by the turnover data for the population in the corresponding industries, giving the so-called imputed starting value for undisclosed income for the entire industry. These values result in too high a figure for undisclosed income as most businesses manage their affairs properly. Therefore, it is presumed that the real undisclosed income in an industry, its missing turnover, amounts to roughly 20-40% of its starting

value by industry. The same method is used to assess hidden wages. The share of hidden wages in turnover is multiplied by the turnover data of the populations in the equivalent industries resulting in the so-called imputed starting value of hidden wages. The real hidden wages turnover in an industry comes to roughly 20-40% of its imputed starting value.

Calculations about the hidden economy should be treated with caution. There are many defects in the standard industrial classification of the tax administration's auditing statistics as not all enterprises have an industry that is current, or else their industry is wrongly designated. Making calculations is also complicated by the fact that only some of those engaged in the hidden economy are randomly selected as tax audit targets. Most target enterprises are audited due to negligence in their tax returns or tax payments or because they were reported. Moreover, it is difficult to allocate tax audit results to the correct statistical year because tax audits can cover several years of tax returns.

Most benefits in kind are regarded as taxable income, subject to tax withholding. In the source materials used for national accounting, benefits in kind are generally included in earnings. Sources consist of the Business Register and the structural business statistics.

Not all benefits in kind are taxable earnings. For example, their taxable value does not always equal their real value. In such a case, the excess is included in other expenses (mainly in intermediate consumption). Other benefits in kind outside the tax net in Finland are the commonly available staff discounts and various kinds of recreational staff costs.

These benefits in kind not subject to tax are added to earnings, in which context a report on labour costs in the private sector produced by Statistics Finland in 2000 is a help. Benefits in kind exceeding the taxable value and staff recreational expenses come under miscellaneous expenses in source materials, for example. The increase to be added to wages must be deducted from intermediate consumption. A corresponding addition proportionate to staff discounts must be recorded in market output in order that operating surplus not be distorted because of additions to wages and salaries.

A share equal to 0.4% of wages and salaries earned in principal occupations is added to benefits in kind at the level of the overall economy. The figure was reached based on a statistical survey of the labour costs conducted in 2000. It does not include items used for in-service training or staff recreation.

Tips and service gratuities are treated as wages and salaries. Data are got from the Household Budget Survey. It is supposed that earnings from this source are as high as the expenditure reported in the survey. Tips and service gratuities left by non-residents are estimated based on tourist volume data.

#### ***4.6.2 Gross operating surplus and mixed income***

According to the tax administration's auditing statistics, the total value of the hidden economy amounted to FIM 740 million, based on findings for 1997. Additions to the income of a business are one of the tax administration auditing office's key results as far as the national accounts are concerned. Hidden income can lower output and thereby lower value added and gross operating surplus/mixed income.

Pekka Rytönen Oy Consultants made estimates of the possible size of undisclosed income and its influence on output based on tax auditing data from the tax administration. In this calculation method, income undisclosed in tax audits (additions to the income of the business) is correlated by industry to the turnover of audited cases. Multiplying the share of turnover for undisclosed income in such cases by the turnover data of the population of the corresponding industries results in the so-called imputed starting value of the industry as a whole. The starting value produces too high a figure for undisclosed income since most businesses manage their affairs properly. Therefore, it is presumed that the real undisclosed income of an industry, the missing turnover, is closer to 20–40% of the starting value of the undisclosed income by industry.

Calculation of the hidden economy is described in greater detail in conjunction with each industry (cf. Sections 3.7-3.22).

Some hidden economy income is included in mixed income obtained by households (cf. Section 4.11).

## 4.7 *Compensation of employees*

### 4.7.1 *Wages and salaries*

Counted as wages and salaries are those earned during regular working hours, sick leave or after an accident, holiday wages and salaries and holiday bonuses, wages and salaries while in training, during a military refresher course, while children are sick, remuneration for weekday religious holidays and other days off, retirement bonuses, wages and salaries while on redundancy notice, and wages and salaries in the form of productivity and other bonuses and benefits in kind comparable to cash. Any sickness insurance compensation obtained during sickness or maternity leave is deducted from wages and salaries.

Included in cash amounts of wages and salaries are social contributions, taxes on income, etc., payable by employees, even if retained by the employer and paid directly to the social security system, tax authorities, etc. on behalf of employees.

Wages and salaries in the form of benefits in kind consist of goods and services or other benefits offered free or at a lower price by employers and which employees may use at their leisure and discretion according to their own or their family's need.

In Finland's national accounts, wages and salaries are calculated in two ways. They are calculated either as the total for the overall economy mainly from aggregate data sources or by industry. Because the total calculated by industry does not tally with the total from aggregate data sources, an adjusting item becomes necessary to resolve the discrepancy. This item is added to (or deducted from) the wages and salaries total by industry so that the total tallies with the overall economy total. The wages and salaries total calculated from aggregate data sources for the overall economy is thus definitive.

Next, we will show how the national total of wages and salaries is calculated and then show how wages and salaries are calculated for various industries.

#### 4.7.1.1 Total wages and salaries in the economy

The key data source of wages and salaries is the taxation levy statistics (Table 1: Earnings of natural persons) published by the National Board of Taxes. Data are obtained in November of the year following the tax year. The material is, naturally enough, aggregate data.

The following subitems are counted as wages and salaries under the section on total earnings, etc. (for taxes levied in 2004):

- Wages and salaries from principal occupation (includes benefits in kind),
- Remuneration of costs as a benefit comparable to wages and salaries
- Seafarers' income
- Wages and salaries for a subsidiary occupation
- Remuneration for work.

The classification used in the statistics has varied from year to year. Benefits in kind did not come under wages and salaries from a principal occupation earlier, but they are still obtainable separately. Earlier, construction work holiday wages and salaries were also a separate item, but are now included in wages and salaries from a principal occupation. The subitem "delivery work" is not calculated because it is part of forestry entrepreneurial income. Remuneration for work includes fees paid to athletes and certain portions of the staff fund (Preliminary Tax Withholding Act, Article 25).

The above items are used as such and not their sum "total earned income, etc.", because the total of these items differs from it. According to the tax administration, the subitems are more reliable.

The wage and salary total derived from the taxation levy statistics must be adjusted because it does not contain all wages and salaries earned and, again, contains items not counted as wages and salaries. The figures are adjusted as follows:

Employee stock options with the exception of so-called synthetic options are deducted from benefits in kind. This took effect in 1998. Any options realised before then are included in wages and salaries. Starting in 2000, the National Board of Taxes has stated income from employee stock options separately so it has no longer been necessary to deduct them from other benefits in kind.

Employee stock option benefits are interpreted as holding gains from the ownership and sale of a financial claim. In that case, they are assigned to revaluation accounts, which are not in use yet in Finland. Because option benefits do not constitute an expense for the employer (except for social contributions payable to the Social Insurance Institution KELA), allowing them to qualify as wages and salaries would distort the operating surpluses of corporations and the national economy.

A share equal to 0.6% of wages and salaries earned in a principal occupation is added to benefits in kind (excluding options). This derives from the fact that taxable benefits in kind do not include all such benefits. Based on labour costs statistics compiled in 2000, it is estimated that this share equals 0.6 % of wages and salaries earned in a principal occupation.

Daily allowances and benefits in kind are added to the wages of conscripts and conscientious objectors doing alternative service. Data are to be found in

State accounting records and correspond to the wages and salaries scales in the industry "National defence equipment and conscripts" (752).

Sickness insurance compensation received by employers is deducted from wages and salaries in order to avoid duplication. Compensation received by employers from the Social Insurance Institution (KELA) for absences due to sickness is deducted because this kind of compensation is treated as a social security benefit obtained by households. Data are to be found in KELA's Review of Statistics.

The President's salary is also added to wages and salaries because it is not subject to tax. Data are to be found in the state accounting records.

The item Other earnings (earlier known as gratuities) in taxation levy statistics is added to wages and salaries because it is taxable income.

The premiums obtained by staff funds are counted as wages and salaries, even if not given to staff. Businesses record them as wages and salaries expenses. Data are from staff fund statistics for the years 1993–1996. Since 1997, they have been recorded under work compensation in taxation levy statistics and the item is no longer taken into account separately.

Tips and service gratuities are counted as wages and salaries. Data are to be found in Household Budget Surveys. It is presumed that earnings are as high as the expenditure in the survey. Interim years are based on growth in the output of hotel and restaurant activities. Tips and service gratuities paid by non-residents are estimated based on tourist data.

Hidden economy wages and salaries are included if they occur in industry calculations (cf. Section 4.7.1.2).

Based on the above adjustments, the domestic production wages and salaries total is obtained. This does not include earnings from rest-of-the-world sources.

**Table 38: Wages and salaries in the national accounts 1998-2004\*, EUR million**

<b>Wages and salaries in the national accounts</b> EUR million	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004*</b>
Wages and salaries from main occupation	41 678	43 727	46 753	49 843	51 575	53 421	55 696
Benefits in kind (taxable, incl. employee stock options until 1999)	712	1 499	669	736	758	748	767
Other benefits in kind (0.4%-0.6% of wages and salaries from main occupation)	167	175	281	299	309	321	334
Benefits in kind for conscripts & conscientious objectors doing alternative service	91	97	102	112	114	113	115
Remuneration of costs comparable to wages and salaries	63	61	59	55	52	50	49
Seafarers' income	275	280	277	279	277	283	268
Wages and salaries from a subsidiary occupation	807	862	914	951	980	967	1 047
Construction sector holiday wages and salaries	0	0					

Remuneration for work		214	182	201	209	216	226
Gratuities / Other earnings	115	103	100	81	79	67	72
Employers' sickness insurance compensation	-265	-282	-300	-314	-350	-379	-402
President's salary	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Premiums obtained by staff funds							
Tips and service gratuities	4	4	4	5	5	5	5
Informal pay allowance paid for the care of an ill person at home (deducted from remun. for work)	-58	-61	-64	-73	-76	-82	-88
Hidden economy	422	427	465	480	480	680	582
Employee stock options	-168	-875	(997)	(528)	(492)	(166)	(268)
<b>Total national wages and salaries</b>	<b>44 057</b>	<b>46 193</b>	<b>49 443</b>	<b>52 656</b>	<b>54 411</b>	<b>56 410</b>	<b>58 672</b>

#### 4.7.1.2 Wages and salaries of market producers by industry

##### *Agriculture (01)*

The main sources of wages and salaries data are the agricultural enterprise and income statistics, local government financial statistics and financial statement statistics of enterprises. The first of these reflects local farm economy KAUs, taxed according to the Farm Economy Income Tax Act, and the last reflects those of other units. Local government financial statistics reflect local government employee wages and salaries and relief agricultural worker wages for which local authorities are reimbursed by the State. This is not entered in agricultural enterprise and income statistics. The latter also includes wages in the form of benefits in kind.

##### *Hunting, trapping and game propagation*

The total of wages and salaries is obtained using the Business Register showing the wages and salaries paid by the Central Organisation of Hunters, game management areas and game management associations.

##### *Forestry, logging and related service activities (02)*

Wages and salaries for **growing of forests** are obtained using Statistics Finland's Business Register. In addition, note is taken of changes in employee numbers, working days and hours to be found in Statistics Finland's Labour Force Survey and the index of wage and salary earnings.

Employers' social contributions are obtained using the Finnish Centre for Pensions' retirement pension payment percentages for enterprises, the payment statistics on employers' liability insurance, group life insurance payment statistics and Statistics Finland's structural business statistics.

The Business Register is the source for the total wages and salaries of **timber harvesting**. The sum includes tool allowances, which are not classed under intermediate consumption because of the lesser value attaching to them and insufficient statistical data. The total wage sum is increased somewhat to accommodate the undeclared wages paid by private forest owners and logging enterprises. Employer social contributions are calculated on the same principle as in the growing of forests industry.

**Other forestry:** The sources for National Board of Forestry wages and salaries are the Board's profit and loss statements and the supplementary

question about the use of funds. The total of wages and salaries for other establishments is obtained using the Business Register.

Employers' social contributions are calculated on the same principle as in the growing of forests industry.

**Forestry and related services:** The total for wages and salaries is obtained using the Business Register, which includes wages and salaries paid by forestry societies, forestry centres and the Forest Development Centre Tapio.

Employers' social contributions are calculated on the same principle as in the growing of forests industry.

### *Fishing (B)*

Wages and salaries are obtained using Statistics Finland's Business Register. The total wage sum is increased somewhat by estimating undeclared wages.

### *Manufacturing (CDE)*

The structural statistics questionnaire is used to request wage and salary amounts from establishments. The amount includes all items subject to tax withholding.

Wage and salary totals for enterprises outside the survey are taken directly from company wage and salary data in the profit and loss statement of the business income tax register from which, for example, benefits in kind equivalent to wages and salaries may happen to be omitted. Data about wage and salary totals for these enterprises are compared with Business Register and payment control data and any necessary adjustments are made.

The wage and salary data of manufacturing establishments of non-industrial companies with less than 20 staff, the missing small enterprises and local authority enterprises are to be found in the Business Register, payment control data and the financial statistics of local authorities.

### *Building construction (4501)*

Wages and salaries in the building construction industry are counted by sector.

Wages and salaries of **non-financial corporations** were calculated for the base year as the product of total working hours and average hourly wage. The base year was taken as 2000. Hourly wages including subsidiary costs, but without social security contributions for construction of buildings were to be found in the publication "Labour Costs in the Private Sector 2000". The hourly rate was calculated separately for salaried and wage-earning employees. An estimate was made of the number of employees in enterprises by tallying the number employed in the construction of buildings with the number employed in the construction of buildings in the Labour Force Survey. The share of self-employed persons compared to employees in enterprises was to be found in data in the Business Register. A total of 15% of hours worked by employees were believed to be hidden economy hours. This supposition relies on the report "Hidden economy in construction in the 1990s" (Pekka Rytönen Oy, Consultants). The wage per hour in the hidden economy is calculated without subsidiary costs or employers' social contributions. The official wages and salaries (including

households of employers and entrepreneurs) for the base year were roughly 10% higher in accounting than were the wages and salaries in business statistics.

Annual wages and salaries of enterprises are calculated using annual growth data from the Labour Force Survey, structural business statistics and the index of wage and salary earnings.

The wages and salaries paid by employers and **entrepreneurs** are to be found in the establishment file in the Business Register.

### *Civil engineering (4502)*

Wages and salaries for **market production** of the industry are to be found in the Business Register. It contains wages and salaries paid by enterprises for which civil engineering is their main industry. Wages and salaries paid by Sonera Corporation in the civil engineering sector are added. Wages and salaries paid for foundation construction relating to the construction of buildings must be deducted in order to obtain the definitive sum.

**In non-market production**, wages and salaries in local government civil engineering are calculated in two parts: 1) Own-account investments in local government civil engineering are derived from the financial statistics table demonstrating the breakdown of local authority investment under "Fixed structures". Total investments, or new construction, are divided in accordance with this framework into materials and supplies and staff costs, which are then subdivided into wages and salaries and social contributions as appropriate. 2) Wages and salaries in maintenance and repairs are calculated on the basis of function 460 'Traffic routes' of the financial statistics of municipalities and joint municipal authorities. To these are added the equivalent data for the Government of Åland from its financial statement data.

The resources used by Evangelical Lutheran parishes for the construction and maintenance of cemeteries are derived from the analysis of capital economics in their financial statistics. The amount is increased to correspond to the upkeep of the cemeteries of all religious denominations. All this is intermediate consumption for civil engineering, whose share of output is presumed to be the same as that of local authorities. When intermediate consumption of civil engineering is deducted from the presumed output, the result is compensation of employees. The latter is subdivided into wages and salaries and social contributions as appropriate.

### *Construction service activities (4509)*

Wages and salaries are those summed for Industry 455 in the Business Register.

### *Wholesale and retail trade, hotel and restaurant activities (GH)*

In order to evaluate wages and salaries in the areas of wholesale and retail trade (G) and hotel and restaurant activities (H), the primary source of data used is the Business Register and the structural business statistics survey base. In addition, the following reports published by Statistics Finland serve to refine the picture of the wage and salary level in these areas: "Labour costs in the private sector" (most recently from 2000), "Private sector

monthly salaries", "From wages and salaries to annual earnings, the wage and salary structure".

The structural business statistics survey base offers information about the compensation of employees at wage levels comparable to the amount of turnover and staff numbers in the wholesale and retail trade, for example. The problem with structural business statistics from the national accounts standpoint is the use of the enterprise as the actual unit. The national accounts were set up using functional production accounts with the establishment as the unit. As a result, the wage level in the wholesale and retail trade and hotels and restaurants is drawn from the establishment register.

The figures for the wholesale and retail trade in the national accounts are compiled for five subindustries. The starting wage and salary level at the overall level of wholesale and retail trade (G) in the national accounts (in other words, the level to which hidden economy wages and salaries and other adjusting items must be added) corresponds closely to the wage and salary level of the overall wholesale and retail trade industry in the establishment register. The starting point in reviewing wages and salaries is to compare the level in Sale, repair and maintenance services of motor vehicles (Industry 50) with wage and salary levels in the corresponding industries in the establishment register. Based on a comparison, the total wages and salaries should be roughly the same. Looked at separately, the wage and salary level in "Maintenance and repair of motor vehicles" (Industry 502), for example, may differ from the level of the equivalent industry in the establishment register.

The same method is followed in relation to the "Wholesale trade" (51), the "Retail trade" (521) and the "Repair of personal and household goods" (527). If wages and salaries in these three classes of industry are added together, the total should correspond to the level in the establishment register. If the industries are checked separately, minor variations from the level in the establishment register are permitted.

Starting wage and salary levels in the two subindustries of the "Hotel and restaurant industry" (551 Hotels, 553 Restaurants) may also differ from wage and salary levels in the establishment register, but the starting levels in the national accounts reflect fairly closely overall industry wage and salary levels in the establishment register (H).

The above critical angle was taken because Statistics Finland's index of wage and salary earnings treats the sale and repair of motor vehicles as a single entity. Wholesale and retail trade likewise forms a single entity, as do hotel and restaurant activities.

The perception of wage and salary levels, the number of those employed (employees/self-employed persons) and hours worked takes place roughly at the same time by availing mainly of the establishment register, the index of wage and salary earnings and the Labour Force Survey. The aim is that no serious contradiction or glaring discrepancy should occur between national account figures and the main sources.

Hidden wages and benefits in kind beyond the reach of the tax net are added to the above official wage and salary level.

Hidden economy transactions occur in the wholesale and retail trade in retail sales of motor vehicles, repair of motor vehicles and household appliances, and in retail sales in special shops of foodstuffs, beverages and tobacco. The wholesale trade is thought to remain beyond the influence of the hidden economy. It occurs in hotel and restaurant activities where the number of staff is less than 20 persons.

Relying on the 2000 labour cost survey, the cost of benefits in kind (other staff benefits) in the wholesale and retail trade (G) overall amounted to 0.78% of the wage and salary level in accordance with the establishment register. The cost of benefits in kind (other staff benefits) for hotel and restaurant activities amounted to 0.91% of the basic wage and salary level in the establishment register. Figures for output and intermediate consumption were correspondingly adjusted using these percentages so that operating surplus does not change.

### *Transport (I)*

Wage and salary calculations rely primarily on Statistics Finland's Business Register. It is supplemented from other sources and checked using special reports. The additions are management units of transport enterprises and public market output. Key management units are shipping companies engaged in maritime transport and their management establishments, certain head offices in the forwarding and loading sector and the group management of the national railways and post office. Public market output includes local government transit companies and harbours and unincorporated state enterprises responsible for shipping lanes, ferries and piloting.

Wages and salaries for ordinary activities alone are counted. Wages and salaries for construction and repair activities are deducted from business activity wages and salaries as they are part of investments and repair activities. Data showing total earnings from accident insurance claims resolved serve as benchmark data when making these calculations.

### *Financial intermediation and insurance (J)*

Wage and salary levels for financial services are to be found in banking statistics compiled by Statistics Finland.

Wage and salary levels for insurance services are calculated using data on salaries gathered by the Federation of Finnish Insurance Companies and the Insurance Company Statistics.

Investment firms statistics compiled by Statistics Finland and individual annual reports and financial statement data are used for activities auxiliary to financial intermediation and insurance.

### *Real estate activities (KA)*

Wages and salaries are calculated as the product of total working hours by average hourly wage. The average hourly wage is calculated to include auxiliary expenses, but not employers' social security contributions. It is first calculated for real estate activities (TOL 70) using the publication "Labour Costs in the Private Sector 2000". Then the average hourly wage is calculated for each subindustry by means of data on wages and salaries in the annually published "Finnish Enterprises", the average yearly hours

worked derived from the Labour Force Survey and the index of wage and salary earnings (under the heading "Real estate and business activities, private hourly rates of wages and salaries"). Broadly speaking, wages and salaries in the industry follow wage and salary levels in the Business Register.

There are no employed persons or wages and salaries in the industry "Letting and operation of dwellings" (7021). Instead they are included in "Management of real estate on a fee or contract basis" (7032).

Wages and salaries in "Management of real estate on a fee or contract basis" (7032) are to be found in wage and salary data in the Business Register. Wages and salaries in housing corporations and residential real estate companies are calculated by multiplying the total floor area of these companies by the staff costs per square metre in housing corporations and State-subsidised residential buildings, derived from profit and loss statements from which employers' social contributions in staff costs have been deducted.

#### *Business activities (KB)*

Wages and salaries are to be found in establishment data in the Business Register. Wages and salaries estimated to be in the hidden economy are added.

#### *Other services (MNO)*

Wages and salaries are obtained directly from the Business Register. Where municipal quasi corporations are concerned, they are to be found in local government financial statistics. Wages and salaries estimated to be in the hidden economy are added.

### **4.7.1.3 Wages and salaries of general government and non-profit institutions**

#### *Non-profit institutions*

Wages and salaries of non-profit institutions serving households are based on establishment data in the Business Register.

#### *Central government*

When compiling central government wages and salaries, the main data sources used are consolidated central government accounting data and the Financial Statement and Report of Central Government. The following accounts in central government on-budget accounting are recorded as wages and salaries: salaries for permanent posts, salaries for employment relationship, reimbursements in accordance with the Sickness Insurance Act, other wages and salaries and changes to holiday pay debt. Salaries mostly consist of permanent post and employment relationship salaries. In addition, benefits in kind for conscripts and conscientious objectors doing alternative service are counted as wages and salaries in the defence equipment and conscripts industry: meals and travel.

## Local government

In local government, the key sources used are the financial statistics of local authorities and local government regional authorities, the financial statement of the Government of Åland, the annual reports of the Association of Finnish Local and Regional Authorities and the Commission for Local Authority Employers and local government sector wage statistics (in Statistics Finland's "Local Authority Sector Monthly Salaries", based on the local government staff register. It contains staff numbers and a cross-section of aggregate data for October).

Wages and salaries are included in financial statistics Table 01 under expense item "Wages and salaries". It appears in financial statistics as a net amount, i.e. in the profit and loss statements of municipalities and joint municipal authorities it is equal to wages and salaries after the deduction of adjustments for staff compensation. Monetary benefits in kind paid in the calculations for municipalities are added to wages and salaries in the national accounts.

Public utility companies, being calculated in the non-financial corporations sector, are excluded from local government calculations. Additionally, the wages and salaries of holiday relief farm workers are recorded in the national accounts in production and generation-of-income accounts of the agriculture industry. These are deducted from local government financial statistics (Industry 853).

## Social security funds

Wages and salaries of employee pension schemes are to be found in a summary produced by the Federation of Finnish Insurance Companies. Wages and salaries of pension funds and trusts are obtained from the Insurance Supervisory Authority. Wages and salaries of the Local Government Pensions Institution and other corresponding insurance sector companies are to be found in their respective annual reports.

The main data sources for other social security funds are shown in Section 3.18.4. The amounts include the annual holiday pay debt and meals benefits.

### 4.7.1.4 Adjusting item for wages and salaries

Earnings calculated by industry do not tally with the sum calculated for the overall economy. Balancing is made so that the discrepancy is adjusted in relation to the industry-specific wages and salaries with the figures of the market producers of the accounting industries. A correction in the same direction is made to the operating surplus. Employers' social contributions are adjusted with the same method separately (Section 4.7.2.3).

**Table 39: Wages and salaries by main branch of activity incl. adjusting items, 1995 – 2004, EUR mil.**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
O Industries, total	37 056	38 922	41 124	44 057	46 193	49 443	52 656	54 411	56 410	58 672
A Agriculture, hunting and forestry	509	488	487	505	552	572	598	609	631	641
B Fishing	11	10	10	10	9	9	9	11	11	10
C Mining and quarrying	97	95	105	107	113	121	130	130	135	130
D Manufacturing	9 170	9 529	10 048	10 909	11 307	12 214	13 037	13 017	13 216	13 562
E Electricity, gas and water supply	490	516	520	536	535	524	543	533	531	544
F Construction	2 155	2 366	2 700	3 027	3 212	3 469	3 605	3 682	3 804	4 011
G Wholesale and retail trade	4 176	4 348	4 578	4 922	5 197	5 543	5 792	6 147	6 330	6 588

H Hotels and restaurants	813	846	880	944	1 002	1 070	1 138	1 176	1 207	1 254
I Transport, storage and communication	2 862	3 001	3 181	3 425	3 535	3 705	3 882	3 990	4 102	4 257
J Financial intermediation and insurance	1 355	1 300	1 273	1 260	1 299	1 409	1 458	1 416	1 435	1 428
K Real estate, renting and bus. activities	2 807	3 036	3 376	3 849	4 329	4 967	5 644	5 999	6 393	6 782
L Administration; compuls. social security	3 074	3 239	3 424	3 510	3 631	3 787	4 017	4 189	4 394	4 537
M Education	3 055	3 211	3 331	3 522	3 671	3 825	4 023	4 226	4 423	4 617
N Health and social work	4 820	5 182	5 369	5 587	5 755	6 072	6 511	6 916	7 266	7 632
O Other community, social & personal service activities.	1 618	1 711	1 800	1 894	1 992	2 107	2 225	2 321	2 466	2 591
P Household service activities	44	44	42	50	54	49	44	49	66	88

## 4.7.2 Employers' social contributions

Employers' social contributions are either real or imputed. The former are divided into compulsory and voluntary. They consist of contributions paid by employers on behalf of employees to the issuer of the insurance (social security funds and privately financed systems). The payments cover statutory (compulsory) insurance premiums in accordance with accepted practice and based on a contract, and other voluntary insurance premiums to indemnify against social risks or needs.

Employers' compulsory social contributions consist of national pension and sickness insurance contributions to KELA, employee pension, unemployment, statutory accident and group life insurance contributions.

Employers' imputed social contributions are the equivalent of non-funded social benefits, which employers pay directly to their employees or former employees and other persons so entitled without an insurance corporation or independent pension fund and without establishing a special fund for the purpose.

In Finland's national accounts employers' social contributions are calculated in two ways, like wages and salaries. They are calculated either as the total for the overall economy mainly from aggregate data sources or by industry. Because the total calculated by industry does not tally with the total from aggregate data sources, an adjusting item becomes necessary to resolve the discrepancy. This item is added to (or deducted from) the employers' social contributions total by industry so that the total tallies with the total for the overall economy. The employers' social contributions total calculated from aggregate data sources for the overall economy is thus definitive.

It will be explained below first how employers' social contributions are calculated for the overall economy and then how they are calculated by industry.

### 4.7.2.1 Employers' social contributions in the overall economy

#### *Employers' national pension and sickness insurance contributions*

Employers' national pension and sickness insurance contributions are deposited in KELA. Information is available on cumulated amounts through a special survey produced by Statistics Finland each year.

National pension and sickness insurance contributions are deposited in KELA in the month after wages are received. Deposits made in January are for the preceding December. Deposits in the national accounts are timed for the following year, i.e. on a cash-basis principle.

### *Employee pension insurance contributions*

Data on the accrual of various employee pension insurance contributions are to be found in insurance company statistics for the TEL (Employees' Pensions Act), LEL (Temporary Employees' Pensions Act), TaEL (Pensions Act for Performing Artists and Certain Groups of Employees), YEL (Self-employed Persons' Pensions Act), MYEL (Farmers' Pensions Act) funds and the Seamen's Pension Fund. Further employment insurance contributions paid into other employee pension institutions are to be found in their annual reports.

Employment insurance contributions paid by the State are paid into the State Pension Fund (independent of the budget) from which data about them are available. Only the portion paid by the employer is taken into account.

Employers' insurance contributions paid into the Government of Åland's Pension Fund as well as those paid into KELA's own Pensions Liability Fund are added to the employee pension insurance contributions.

### *Unemployment insurance contributions*

Accrued unemployment insurance contributions are to be found in the profit and loss statements of unemployment insurance funds. The premiums received are recorded in the funds, based on monthly notifications. The insurance company shows on its monthly statement the unemployment insurance contributions accruing for that month and any interest and penalty interest payable by insurance companies, which the insurance company pays into the fund according to the contract. The insurance company indicates in its December statement the amount of premium payments accruing by the end of December and the interest payable according to the contract. The unemployment insurance fund's profit and loss statement includes any premiums accrued in December which are paid to the fund in the following year.

Insurance companies collect any unemployment insurance contributions from delinquent policy holders, enterprises under a restraining order, in liquidation or in a voluntary debt restructuring phase and protect the fund through powers invested in them by a contract between the fund and the Association of Accident Insurance Institutions. The insurance companies record the accrued premiums in their monthly statements. At the end of the period, the premiums due for collection or forcible collection are not thus included in the receipts or receivables of the unemployment insurance fund.

### *Accident insurance contributions*

Accrued accident insurance premiums are to be found in insurance company statistics.

### *Group accident insurance contributions*

Accrued accident insurance premiums are to be found in insurance company statistics.

### *Employers' voluntary social contributions*

Counted among employers' voluntary social contributions are LEL and TEL additional insurance premiums, group accident and group pension premiums

paid to life assurance and retirement pension insurance companies, voluntary accident insurance premiums and supporting contributions made to workplace relief funds (pension, burial, redundancy, and sickness insurance funds).

Data about these are to be found in insurance company statistics and summaries of the financial statements of sickness insurance funds.

#### *Employers' imputed social contributions*

Accrued employers' imputed social contributions are recorded in the same amount as the total paid for them in various industries (cf. Section 4.7.2.2.).

#### *4.7.2.2 Employers' social contributions by industry*

Employers' social contributions are calculated for various industries in a mostly uniform way, i.e. by multiplying wages in the industry by the percentages for the various contributions (percentage payment method). No hidden wages are included because employers' social contributions are not paid for them.

The payment percentages for employers' social contributions vary from year to year. The percentages, which have at times changed during the year, are ratified by the Ministry of Social Affairs and Health.

Exceptions to the percentage payment method for employers' social contributions in the central government industries are obtained directly from the non-wage labour costs account in business accounting. The "Accident insurance premiums" account is divided into accident and group life insurance premiums. In addition, payments from the "Change in the liability for non-wage labour costs for holiday pay" account are broken down into the various types of contribution in proportion to the other social security contributions paid.

**Table 40. Employers' social contributions 2000-2004 by type of insurance.**

Payment type	2000	2001	2002	2003	2004
<b>National pension and sickness insurance</b>					
- Private I	3.80	3.60	3.06	2.964	2.964
- Private II	5.60	5.60	5.22	5.164	5.164
- Private III	6.50	6.50	6.12	6.064	6.064
- Unincorporated state enterprises	5.20				
- Central government	6.80	6.80			6.814
- Local government	4.75	4.75	4.12	4.01	4.014
- Parishes	4.764	4.76	4.137	4.014	4.014
TEL (Employees Pensions Act) on average	16.80	16.60	16.7	16.8	16.8
LEL (Temporary Employees' Pensions Act), on average	17.50	17.30	17.4	17.6	17.8
TaEL (Pensions Act for Performing Artists and Certain Groups of Employees)	11.30	12.50	12.5	13.2	14
MEL (Seamen's Pension Fund)	10.00	10.00			
KvTEL (Local Government Employees' Pensions Act)	21.70	22.20	22.6	22.76	23.19
VEL, (State Employees' Pensions Act), most common					
KiEL (Evangelical-Lutheran Church Pensions Act)	27.00	27.00	27.00	27.00	27.00

Unemployment insurance contributions					
- On wages and salaries up to EUR 840 940	0.90	0.80	0.7	0.6	0.6
- On wages and salaries exceeding EUR 840 940	3.45	3.10	2.7	2.45	2.5
- except in unincorporated state enterprises					
2.00					
Group life insurance contributions					
- Private	0.08	0.095	0.095	0.081	0.08
- Local authority	0.100	0.100	0.10	0.10	0.10
- Central government	0.087	0.08			
Accident insurance contributions					
- on average	1.08	1.20	1.2	1	1

#### 4.7.2.3 *Adjusting item for employers' social contributions*

The total of employers' social contributions calculated by industry does not tally with the contributions for the whole economy. Balancing of industry-level employers' social contributions is made so that the difference is taken to non-specified employers' social contributions (D1219K) of market producers (T10) of the accounting industries. The adjusting item is divided by industry in relation to the social contributions of market producers. The adjustment has an opposite effect on operating surplus.

## 4.8 *Other taxes on production and imports*

Other taxes on production are centrally calculated, both the figures for the overall economy and division of taxes between industries. The sources used are the accounting records and annual budgetary report based on the government's budgetary estimate and special reports. Other taxes on production consist of four State levied taxes: vehicle tax, motor vehicle tax, a tax on shipping (a harbour fee per net registered tonne per calendar year) and a waste disposal tax as well as the payment for nuclear waste study collected by the extra-budgetary National Nuclear Waste Management Fund. In addition to other taxes on production, there are consequences for defaulting on vehicle tax and motor vehicle tax. The consequences for defaulting are presumed to be equally divided between enterprises and households. Default taxes amount to a fairly small sum, totalling roughly EUR 1.7 million annually

From 2004 the motor vehicle tax is determined so that the basic tax on motor vehicles is paid on passenger cars and vans (corresponds to prior motor vehicle tax), the size of which depends on the year of introduction of the vehicle. In addition, vehicle tax on motive power is payable on other than petrol-powered vehicles (corresponds to prior diesel tax).

The share paid by households is first deducted from tax revenues as it is classed under other indirect taxes. The rest is classed as other taxes on production. Data on vehicle tax from the Finnish Vehicle Administration and special reports are used in the distribution. The share of taxes from the transport industry is first calculated, using data on motor vehicle tax from

the Finnish Vehicle Administration. Otherwise, motor vehicle tax is partitioned among industries starting with those registered first in the vehicle administration's register.

The waste disposal tax is only paid by the environmental management industry. Harbour fees belong strictly to the water transport industry.

No import taxes have existed since 1994.

#### **4.9 Other subsidies on production**

Other subsidies on production are paid by the general government, the Government of Åland and the European Union. The sources used are the accounting records and annual budgetary report based on the government's budgetary estimate and special reports.

Data on subsidies in the national budget are to be found in items in consolidated accounting data and the Financial Statement and Report of Central Government. A few agriculture subsidy items (the national subsidy of agriculture and horticulture and the European Union income subsidy) are divided among other subsidies on production and products. More precise data on divided subitems are available from the Ministry of Agriculture and Forestry. Subsidies from three funds, the National Housing Fund, the Intervention Fund of Agriculture and the Development Fund of Agriculture and Forestry are added to the other subsidies on production available from the national budget. Also added to the central subsidy estimate are other subsidies on production paid by the Government of Åland and lesser subsidies on production paid by local authorities. After a timing adjustment is applied to agricultural subsidies, the total subsidy amount is obtained. Some of the subsidies are financed by Finland and some by the European Union. Special EU subsidies are paid to agriculture which obtains the greater share. Key subsidies are the agri-environmental subsidy, the agri-horticultural subsidy and harvest catastrophe relief.

Subsidies are broken down in two ways by industry. Most industries can be decided based on budget items in the budget proposal and the Government of Åland budget proposal. Certain subsidies are broken down by industry based on data available from financial statistics offices. For example, product development subsidies are broken down based on data supplied by the accounts office in question.

#### **4.10 Gross operating surplus**

The gross operating surplus is to be found in the national accounts as a residual of market production. Compensation of employees and other taxes on production are deducted from gross operating surplus and other subsidies on production received are added. From this item any mixed income earned by households must still be deducted (cf. Section 4.11). In non-market production, gross operating surplus is identical to consumption of fixed capital because it generates no operating surplus.

The gross operating surplus is also adjusted for the same items as compensation of employees (cf. Sections 4.7.1.4 and 4.7.2.3), but with the opposite sign. The reason for this is that compensation of employees also influences gross operating surplus.

## *Test calculation*

A test calculation of market production gross operating surplus (incl. mixed income of households) was performed independently in Finland during the years 1995-1997. It allowed calculations of GDP based on the income approach by adding compensation of employees, other taxes on production (less other subsidies on production) and consumption of fixed capital in non-market production to market production gross operating surplus.

The main data source used was profit and loss statements from structural business statistics. The data rely on the profit and loss statements of businesses.

An Operating profit + leasing rents item by industry to a two-digit level of classification calculated from the data was used to estimate gross operating surplus. This was not feasible in all industries because the data are not exhaustive enough or the concepts do not match. For these industries, the production method had to be used in a test to calculate gross operating surplus, which was obtained by deducting compensation of employees and other taxes on production from gross value added and adding other subsidies on production.

The industries in question are Financial intermediation and insurance (65 and 66), Letting and operation of dwellings (7021) and Activities of religious and membership organisations (91). A gross operating surplus calculated by the production approach was also used in Forestry, logging and related service activities (02), but calculated independently, mostly based on stumpage income (cf. Section 3.7.2). The imputed value of own-account construction was added to the calculation in the form of a supplementary item to the national accounts.

In agriculture (01), a figure was used to estimate gross operating surplus which was obtained by adding to the data in structural business statistics data derived from agricultural enterprise and income statistics: net income + depreciation. Structural business statistics contain mainly so-called Other enterprises related to agriculture (e.g. cultivation of vegetables, indoor plants and seedlings (01120) and fur farming (01251).

In the recreational, cultural and sporting activities industry (92) the State's share of the profits from pools and lottery activities is deducted from profits, as it is counted as taxes on products.

An estimate of the gross operating surplus of local government utilities counting as market production was calculated by means of local government financial statistics. Both old and so-called new type local government utilities were involved. No data about new enterprises are available by industry so the item was added to industry accumulation in structural business statistics data.

When indirect financial services were deducted from the gross operating surplus for market production thus calculated and compensation of employees plus other taxes on production (less other subsidies on production and consumption of fixed capital for non-market production) were added, the GDP using the income approach was obtained. GDP calculated in this way was less than when calculated by the production approach.

## 4.11 Mixed income

Mixed income denotes income which households obtain as remuneration for their participation as self-employed persons in market production. This income is based on labour input, but it cannot be separated from the self-employed persons' profit and therefore it is called mixed income. Any wages and salaries self-employed persons pay themselves are wages and salaries and not mixed income. The imputed income obtainable from living in an owner-occupied dwelling is operating surplus and not mixed income.

Previously mixed income was calculated as a separate entity, because not all industries by sector were separated in the industry calculations, but now when industry data are recorded by sector, mixed income is derived direct from the total accounting. In the accounting in the household sector the item operating surplus/mixed income, net is mixed income for all others except owner-occupied housing, where operating surplus is generated. In the household sector mixed income is produced in the following areas:

- Agriculture (Industry 01)
- Forestry (02)
- Fishing (B)
- Other industries (C – O)
- Own-account construction
- Renting of dwellings
- Hidden economy
- Artists' royalties.

Mixed income is obtained by deducting intermediate consumption, compensation of employees, consumption of fixed capital and other taxes on production from output and adding other subsidies on production.

### *Agriculture (01)*

The starting points for calculating mixed income in agriculture are the agriculture industry's production and generation-of-income accounts (cf. Section 3.7.1). Production and generation-of-income accounts of other sectors carrying on agriculture are deducted from this production and generation-of-income account, which in practice comprises production and generation-of-income accounts for agriculture belonging to enterprises and the central government. The remainder equals households' generation-of-income accounts.

Calculating the share of enterprises in the agriculture industry is based on structural business statistics data. The method is similar to the mixed income accounting of the other industries (C – O) described below. The share of consumption of fixed capital that applies to enterprises in agriculture is estimated at 4%, namely the same as that invested by enterprises in agriculture in 1995.

### *Forestry (02)*

The mixed income earned in the forestry industry is calculated in the same way as mixed income from agriculture. The starting point is the forestry industry production and generation-of-income account (cf. Section 3.7.2), from which the share of the other sectors is deducted. The other sectors are

enterprises, central government, local government and non-profit institutions.

The spread of output across various sectors is based on the distribution of gross stumpage financial income among various forest ownership sectors.

### *Fishing (B)*

Mixed income from fishing is the same as the output of the fishing industry for own final use which reflects the value of recreational fishing.

### *Other industries (C – O)*

Calculations for other industries are based on structural business statistics data. Cross tabulation is to be found in the data by sectors and industries. All household sector industries are gathered from the data except primary production for which data are incomplete. The household sector includes all self-employed persons who employ less than two working years. Own-account construction, renting of dwellings and artists' royalties are not part of the data, so mixed income is calculated separately in their case. The hidden economy is also not part of the data, naturally.

Output and intermediate consumption are obtained directly from the data. Output is the total of the following variables: turnover, change in inventories, production for own use and other output from business activities. Intermediate consumption is the total of the variables purchased during the financial year, purchases of services by other parties, rents, other leases and miscellaneous fixed and variable expenses. The gross value added is the difference between output and intermediate consumption.

Mixed income is calculated in such a way that wages and salaries, employers' social contributions, consumption of fixed capital and other taxes on production are deducted from gross value added and other subsidies on production are added.

Consumption of fixed capital is obtained by multiplying the consumption figures for market production by the share of households in those industries. The household share of gross fixed capital formation in 1995 was used to calculate the estimate. Finally, consumption figures by industry are added together.

Wages and salaries earned are found directly from structural business statistics. Employers' social contributions are calculated using the appropriate percentages of wages and salaries for the employer in question. Other taxes on production and other subsidies on production are found from general government estimates.

### *Own-account construction*

The output of own-account construction is derived from the imputed hours worked in construction and hourly rates for construction. The hours worked are found in the survey "Hidden economy construction in the 1990s" (1990-1996) produced by Pekka Rytönen Oy, Consultants. The imputed value of own-account construction for hours worked is the average hourly rate for employees engaged in the construction of buildings, excluding employers' social contributions and additional wage and salary costs.

### *Renting of dwellings*

Rental income obtained by households for dwellings owned is household mixed income, after intermediate consumption and consumption of fixed capital have been deducted. Rental income is treated in the national accounts as mixed income, even if there is not any actual labour input involved.

The starting points for calculations are the production and generation-of-income accounts of the Letting and operation of dwellings industry (cf. Section 3.17.2). The market output of this industry is restricted to rental income. The household share of rental income is obtained by means of the dwellings database. The share of rental dwellings owned by households is calculated from intermediate consumption and consumption of fixed capital.

### *Artists' royalties*

An estimate of fees paid to writers was obtained from the Finnish Book Publishers Association. To this figure is added the amount paid for copies, to be found in the annual report of Kopiosto, the copyright society. According to the Finnish Book Publishers Association, 90% of writing income is subject to personal income tax while 10% is subject to business income tax. Thus 90% of fees count as household income. Costs related to writing output, i.e. intermediate consumption, are estimated to be 10% of this income and the remaining 90% is regarded as household mixed income.

Other artists' royalties were not estimated.

### *Hidden economy*

Estimates of hidden economy mixed income are to be found in various industry calculations. The following have been performed so far: construction of buildings, truck and taxi transport, wholesale and retail trade and hotels and restaurants. The calculations are described in more detail in Chapter 3 under the relevant industry.

**Table 41. Household mixed income, 2000 – 2004.**

Mixed income, EUR mil.	2000	2001	2002	2003	2004
<b>A 01</b>	1350	1411	1487	1321	1292
<b>Agriculture</b>					
<b>A 02</b>	1185	1219	1225	1213	1191
<b>Forestry</b>					
<b>F</b>	1007	1101	1117	1101	1173
<b>Construction</b>					
<b>K Real estate activities</b>	536	599	708	831	849
<b>I Transport, storage and communication</b>	501	544	552	529	538
<b>Other industries</b>	653	747	789	861	959
<b>0 Industries total</b>	5232	5621	5878	5856	6002

## 4.12 Consumption of fixed capital

In Finland, consumption of fixed capital is calculated by means of the capital stock model. Consumption is calculated separately for all industries and types of producer. In market production industries, consumption of fixed capital does not affect gross value added because the latter represents the difference between output and intermediate consumption. In non-market production, on the other hand, consumption of fixed capital does affect gross value added because the latter is equal to the sum of employee compensation and consumption of fixed capital.

Consumption of fixed capital means a decrease in value of fixed capital during the financial period due to physical deterioration, planned obsolescence and ordinary wear and tear. Consumption of fixed capital is a decrease in the value of capital used in production and is shown in national accounts as a production cost in the production account. While consumption of fixed capital itself corresponds to the difference between gross and net value added, consumption of fixed capital is calculated as the difference between investments and net capital stock expressed by the formula:

$$CFC_t = GFCF_t - (NCS_t - NCS_{t-1}), \quad (1)$$

where CFC is consumption of fixed capital, GFCF is gross fixed capital formation and NCS is net capital stock. Consumption of construction investments is assumed to be linear in form, i.e. a constant share of the original value of capital goods depreciates over the entire service life of the goods. The geometric consumption model is applied to machinery, equipment, fixtures and transport equipment and intangible investments, where the constant part is removed from the remaining value of a capital asset during the whole service life of the asset.

Gross fixed capital formation is explained in Sections 5.10, 5.11 and 5.12. In the following, the calculation of fixed capital stock is described.

### *Fixed capital stock*

In Finland, the perpetual inventory method is used to calculate the capital stock. This method involves long investment series, price indices and presumptions about the formation of the survival/mortality function and average service life. The method is supplemented by surveys and administrative data. In the national accounts, there are two concepts of capital stock: net capital stock and gross capital stock. The table 42 shows the classification of fixed assets.

#### **Table 42: Classification of fixed assets.**

<b>AN11</b>	<b>Fixed assets</b>
<b>AN111</b>	<b>Tangible fixed assets</b>
AN1111	Dwellings
AN1112	Other buildings and structures
AN11121	Non-residential buildings
AN11122	Other structures
AN1113	Machinery and equipment
AN11131	Transport equipment
AN11132	Other machinery and equipment
AN1114*	Cultivated assets
AN11141	Livestock for breeding, dairy, draught, etc.
AN11142	Vineyards, orchards and other plantations of trees yielding repeat products
<b>AN112</b>	<b>Intangible fixed assets</b>
AN1121	Mineral exploration
AN1122	Computer software
AN1123	Entertainment, literary and artistic originals
AN1129	Other intangible fixed assets

Currently in Finland, cultivated assets are not included in tangible fixed assets, although they are contained in the flow measure. In other words, consumption of fixed capital is not calculated for cultivated assets.

#### *Net stock of fixed capital, geometric case*

Net capital stock consists of the accumulated value of past investments less the accumulated consumption of fixed capital. The net capital stock is the concept of stock used by the 1993 SNA/1995 ESA accounting system and is used in balance sheets, use tables and in input-output tables. Net capital stock is calculated using geometric depreciation for homogeneous capital good at the end of year  $t$ :

$$NKA_t = NKA_{t-1}(1 - d) + I_t(d/2),$$

where  $d = R/E$  so that the remaining value of capital good will be set at zero when 1.5 x service life is achieved.  $R$  is 1.65 for machinery and equipment, and 2 for non-tangible assets.  $E$  is the service life.

#### *Net capital stock, linear case*

Net capital stock is calculated using straight-line depreciation so that the constant-price net stock for a homogeneous capital asset at the end of year  $t$  is:

$$NKA_t = \sum_{T \geq t - J_t + 1} w_{t-T} I_T d_{t-T}, \quad (2)$$

where  $d_{t-T} = 0$ , when  $T \leq t - E + 0.5$ ,

and  $d_{t-T} = 1 - (1/E)(t - T + 0.5)$  otherwise.

#### *Gross capital stock*

Gross stock is the value of assets that are in the control of producers and still in use and are valued at "as new" prices, irrespective of their age or actual condition. A reduction in the efficiency of capital goods in gross stock is not taken into account. Gross capital stock comprises the cumulative value of

past investments less cumulative retirements. Retirements are presumed to follow the Weibull distribution formula, in other words the amount of investment in year T still in use at the end of year t follows the so-called survival function:

$$w_{t-T} = \exp\left\{-\left[\frac{\Gamma(1+(1/\alpha))}{E}\tau\right]^\alpha\right\}, \quad (3)$$

where  $\tau = t-T+0.5$ , E is the average service life and  $\alpha$  is the shape parameter.

The gross stock at the end of year t is:

$$BKA_t = \sum_{T \geq t-J_t+1} w_{t-T} I_T, \quad (4)$$

where  $T \geq t-J_t+1$  and  $I_T$  is the gross fixed capital formation in year T.  $J_t = \max(1.5\theta_t, 100)$ . In other words, the maximum service life is presumed to be 1.5 times the average service life, but not more than 100 years. Gross capital stocks are used in productivity calculations, for example.

## Valuation

ESA 1995 states that "Fixed assets ... should be valued on the basis of purchasers' prices".

Capital stock can be valued according to three concepts of price:

- fixed replacement prices, or capital goods are valued at given base year prices
- current replacement prices, or capital goods are valued at the current year's prices and
- acquisition prices (so-called historical prices), or capital goods are valued at the price they were at the time of acquisition. In Finland, the first two of these price concepts are used. In the capital stock model, equity at constant prices is inflated to current prices by using investment price indices.

## Service life

Establishing the length of the average service life of capital goods is based on inquiries, administrative sources, expert evaluations and the practice in other countries. For public infrastructure, for example, the average service life of tracks and waterways is based on data in the Finnish Rail Administration, Finnish Road Administration and Finnish Maritime Administration. The length of the service life of manufacturing capital goods are based on Statistics Finland's inquiries concerning fixed asset replacement provisions in industries C,D,E and the length of average and expected service life estimates dating from 1990 and 2002. From 2005 onwards, such inquiries will be conducted every five years.

The service life of dwellings is 50 years, mineral exploration 10 years, computer software 5 years, copyrights 10 years, and land, etc. and other major improvements 30-70 years. The average service lives of other capital assets in non-financial corporations, households and financial and insurance corporations starting from 2002 are shown in Table 43. Table 44 shows the average service lives of other capital goods in general government and non-profit institutions.

**Table 43: Average service life of capital goods in non-financial corporations, households and financial and insurance corporations from 2002**

Industry	Other construction of buildings	Civil engineering, etc.	Transport equipment	Other machines and equipment*
A	35-40	30	9-15	5-12
B	40		10	15
C	30-38	25-33	7-8	17-22
DA	39-40	25-33	7	17-19
DB	35	40	7	14
DC	35	40	7	14
DD	35	25	10	16
DE	40-47	35-39	6-10	15-24
DF	43	40	11	22
DG	40	35	10	18
DH	42-45	40-52	7-9	13-18
DI	40	40	10	18
DJ	37	30-31	8-9	16-20
DK	45	29	8	16
DL	35-40	30-39	7-10	8-11
DM	38-45	40-45	9	14-24
DN	35	35	8	14
E	50-52	35-40	8-10	23-37
F	40	30	10	10
G	40	30	10	15
H	40	30	10	15
I	20-50	20-70	7-25	5-25
IA	20-50	40-70	7-25	5-25
601	50	40	20	25
602	40	40	7-10	5-10
603		40		
61	50	40	25	15
62	20	40	15	15
63	40	40-70	10	15
IB	40	20	10	15
J	40		8	10
K	40-50	40	8-10	10-15
M	50		10	10
N	40-50		8-10	10-15
O	50	40	8-10	10

**Table 44. Average service life of capital goods in general government and non-profit institutions from 2002.**

Industry	Other construction of buildings	Civil engineering, etc.	Transport equipment	Other machines and equipment*
A	40	30		
DB	50			15
DE	50			15
DK	50			15
DN				14
F	40		10	10
G	50		10	15
6301	50	40	10	15

<b>6302</b>	50	52	10	15
<b>6303</b>	50	70		15
<b>6309</b>	50	35	10	15
<b>K</b>	40-50	30-70	10	10-15
<b>L</b>	50	70	10	15
<b>M</b>	50	70	10	15
<b>N</b>	50	70	10	15
<b>O</b>	50	70	10	15

### Sector transfers

The execution of the Finnish NA capital stock calculations is two-staged. In the first stage the PIM (perpetual inventory method) produces the gross and net capital stocks. In the second stage the retirements and the consumption of fixed capital (cfc) are calculated. As assets, however, sometimes are transferred e.g. from the central government to the non-financial sector due to privatisations (or vice versa for that matter), Finland redirects the stocks to their new sectoral origins with correction matrices between the two stages of PIM calculations. An example is the case of the formerly state-owned National Board of Civil Aviation (NBA) which in 1989 was constituted as a budget related government company, in 1990 the Civil Aviation Act was approved and in 1991 the NBA transformed to the Civil Aviation Administration (CAA). In the case of the NBA/CAA the gfcf is until 1988 in the central government sector (S1311), however, after 1989 the gfcf is in the non-financial/household sector (S111) as shown in Table 45. Accordingly both the gross capital stocks (gcs) and the net capital stocks (ncs) are until 1988 in the central government sector and from 1989 on in the market sector.

**Table 45. Industry 6303 Supporting air transport activities gfcf and stocks**

Industry 6303 total gfcf at current prices, EUR mil.	1987	1988	1989	1990
S111	0	0	28	43
S1311	19	24	0	0
Industry 6303 total gcs at current prices, EUR mil.				
S111	0	0	797	883
S1311	559	619	0	0
Industry total ncs at current prices, EUR mil.				
S111	0	0	547	603
S1311	390	427	0	

The normal perpetual inventory calculations for the year 1989 (and the succeeding years) would show up as stocks and cfc and retirements in sector S1311 (although the investments are zero) which is incorrect as the supporting air transport activities are not any longer in the government sector. Therefore the exact amount of gross and net capital stocks that the old (prior to the sectoral transfer) investments amount to is transferred by a correction matrix to their new sectors. After this the second stage is implemented in the PIM calculations, i.e. the cfc and retirements are calculated. To illustrate the procedure a part of the correction matrix for the net capital stock is shown in Table 2 (there is a separate matrix for the gcs). The old investments performed in the central government sector (i.e. prior to 1989) would have produced net capital stocks of EUR 120 million in non-

residential buildings, EUR 428 million in civil engineering and other structures, EUR 33 million in other machinery and equipment and EUR 12 million in computer software in sector S1311 in the year 1989. These are subtracted from the stocks of the central government and added to the stocks in the non-financial sector (S111) which is their new owner. Thus in 1989 the ncs in industry 6303 in the non-financial sector (S111) is EUR  $120+428+33+12=593$  million in year 2000 prices plus the gfcf of EUR 35 million in 2000p (less EUR 1 million that already goes to cfc), i.e. EUR 627 million in 2000p. This amount when inflated back to current prices becomes EUR 547 million.

Thus the Finnish practice of using correction matrixes is uncontroversial and unproblematic. The investments when made are retained in their actual sectors of origin, and when due to privatisations the sector that owns the fixed asset changes the correction matrixes ensure that the procedure is correct.

**Table 46. Part of the correction matrix for ncs, EUR million at 2000 prices.**

			1989	1990
S111	6303	P51121S	120	117
S111	6303	P51121S	428	419
S111	6303	P51131S	33	30
S111	6303	P5122S	12	7
S1311	6303	P51121S	-120	-117
S1311	6303	P51121S	-428	-419
S1311	6303	P51131S	-33	-30
S1311	6303	P5122S	-12	-7

## Chapter 5 The expenditure approach

### 5.0 GDP by the expenditure approach

The accompanying table shows GDP by the expenditure approach. Household final consumption expenditure accounts for 50% and public final consumption expenditure for 20%. Since exports account for 40% of GDP, foreign trade is a key component of Finland's economy.

**Table 47: Gross domestic product by the expenditure approach, 2004.**

#### **Gross domestic product through final use**

1 Final consumption expenditure	111 369	73.3
Private final consumption expenditure	78 122	51.4
Government final consumption expenditure	33 247	21.9
- Individual final consumption expenditure	21 755	14.3
- Collective final consumption expenditure	11 492	7.6
2 Gross fixed capital formation	27 831	18.3
Private gross fixed capital formation	23 367	15.4
Government gross fixed capital formation	4 464	2.9
3 Changes in inventories	904	0.6
4 Exports of goods and services	60819	40.0
5 Imports of goods and services	48470	31.9
6 Statistical discrepancy	-584	-0.4
7 GDP at market prices (1+2+3+4-5+6)	151935	100.0

### 5.1 Reference framework

In the expenditure approach, GDP is calculated as the sum of its expenditure components, or as the sum of demand items. These items consist of final consumption expenditure, investments, change in inventories and exports of goods and services, less imports of goods and services.

In the national accounts, GDP is determined on the basis of the production approach. The expenditure approach is also taken into account as explained in Chapter 6. The difference in GDP, as calculated by the production and expenditure methods of approach, is recorded as a statistical discrepancy. In this chapter will be explained different expenditure component calculations.

### 5.2 Valuation

The use of products is valued at purchasers' prices. Final consumption expenditure therefore includes value-added tax and other product taxes, but not subsidies. The products acquired by instalment payments or an equivalent credit system are recorded by their date of purchase.

Gross fixed capital formation includes value-added tax insofar as it is not tax deductible. Investments are recorded according to the date of the transfer of assets. There are three exceptions to this rule in the national accounts. First, financial leasing is recorded as an investment by the industry using it, even

if there is no change of ownership. Secondly, own-account investments are recorded when they are produced. Thirdly, construction investments are recorded as they are built and not until after completion of the construction, when ownership generally changes hands.

Change in inventories is valued at the average price for the year, i.e. the value of opening and closing stock is averaged for the year and then the difference between them is calculated.

Goods imported and exported are valued at their f.o.b. value, i.e. their value when they leave the exporting country. Exports of services are valued at basic prices and imports of services at purchasers' prices.

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

In calculating government final consumption expenditure, use is made of the financial statistics of municipalities and joint municipal authorities, consolidated accounting data and the Financial Statement and Report of Central Government and the profit and loss statements of various corporations. Use of the pertinent concepts is explained in Section 5.9.

In calculating gross fixed capital formation, use is made of the structural business statistics, the financial statistics of municipalities and joint municipal authorities, and the Financial Statement and Report of Central Government. Use of the pertinent concepts is explained in Section 5.10.2.

### ***5.4 Role of direct and indirect estimation methods***

A summary of the key data sources or estimation methods for the various demand items is shown in the following table.

**Table 48: Key data sources or estimation methods for various demand items.**

Economic activity	Main data source or estimation method
Household final consumption expenditure	Household Budget Survey, or indirect estimation method. Other direct and indirect estimation methods are used
Consumption expenditure of non-profit institutions serving households	Partly direct, partly indirect estimation method
Government final consumption expenditure	Total data, i.e. direct estimation method
Gross fixed capital formation	Partly direct, partly indirect estimation method
Change in inventories	Partly direct (total data), partly indirect estimation method (Agriculture)
Goods imported and exported	Total data, i.e. direct estimation method, partly indirect estimation method for adjusting items
Exports and imports of services	Indirect estimation method

## 5.5 *Role of benchmarks and extrapolations*

Benchmarks and extrapolation are used in calculating household final consumption expenditure (cf. Section 5.7).

Benchmarks and extrapolation are used in calculating gross fixed capital formation of building renovation contained in estimates of investments in the construction of buildings. Calculations for investments in renovation are explained in more detail in Section 3.12.1.

## 5.6 *Main approaches taken with respect to exhaustiveness*

Data sources for the expenditure approach are fairly exhaustive. Calculations are based on total data for final consumption expenditure with respect to goods imported and exported, government final consumption expenditure and partially with respect to gross fixed capital formation, inventories and consumption expenditures of non-profit institutions serving households. The Household Budget Survey, the key data source for household final consumption expenditure, starts basically from very exhaustive premises, except for some consumer headings known to be problematic, i.e. alcohol. There will be more discussion below about additions to be made to Household Budget Survey data.

The hidden economy does not constitute a significant problem for the expenditure approach. Any consumer goods and services produced by the hidden economy are presumed to be included for the most part in Household Budget Survey data.

## 5.7 *Household final consumption expenditure*

### 5.7.1 *Concepts, definitions and classifications*

In compiling estimates of household final consumption expenditure, the concepts and definitions of the European System of Integrated Economic Accounts (ESA 95) are observed.

The product classification of household final consumption expenditure is based on the COICOP classification of individual consumption by purpose for households, as referred to in ESA 95. It has been adapted to the needs of Finland's annual accounts to yield a product classification, which at its most precise level is divided into 182 goods and services headings. The overall heading nomenclature is shown in conjunction with the description of calculating methods.

### 5.7.2 *Data sources*

The key data sources for calculating household final consumption expenditure are Statistics Finland's **Household Budget Survey and Business Register**. They are described separately elsewhere in this description of methods.

Much of the data relies on the calculations of producer industries in the national accounts. Definitions of the consumer share are described in this chapter.

The share of consumption expenditure in the overall use of each product is ultimately determined as a result of balancing the supply and use tables in the national accounts.

Many other data sources of a supplementary nature are also used to calculate final consumption expenditure, of which the most important are shown in the following list. The code numbers in the list are reference numbers for source references in the tables describing the method.

<b>CODE</b>	<b>NAME OF SOURCE</b>	<b>NAME OF COMPILER/PUBLISHER</b>
1	Food and Drink Industry domestic sales statistics	Finnish Food and Drink Industries' Federation
2	The food and beverage economy	Finnish Gallup Food and Farm Facts Ltd
3	National accounting production accounts	Statistics Finland
4	Agricultural statistics yearbook with basic sources	Ministry of Agriculture and Forestry's Information Service (TIKE)
5	Statistics on production of goods	Statistics Finland
6	Foreign trade statistics	National Board of Customs
7	Yearbook of alcohol and drugs	National Research and Development Centre for Welfare and Health (STAKES)
8	Tobacco statistics	STAKES and Statistics Finland
9	Home appliance statistics	Association of Home Appliance Dealers
10	Finnish statistics on medicines	National Agency for Medicines and Social Insurance Institution (KELA)
11	Expenditure on Social Affairs and Health	National Research and Development Centre for Welfare and Health
12	Vehicle register	Finnish Vehicle Administration
13	Mass-media statistics	Statistics Finland
14	Hotel and restaurant industry statistics	Finnish Hotel and Restaurant Association
15	Tourism statistics	Statistics Finland

### 5.7.3 Calculation methods

#### 5.7.3.1 General principles: parallelism and iteration

When calculating final consumption expenditure from different sources and points of view (both supply and demand), the data available are converted to equivalent consumption expenditure estimate concepts and definitions in the national accounts.

The choice of the ultimate final consumption expenditure estimate in the national accounts is based on the careful comparison and reliability assessment of estimates derived from various sources.

In the ideal case, these estimates should be compared each year. This is not possible because some key data are produced at rather irregular intervals. The Household Budget Survey, for example, is conducted at separately decided intervals (...1998, 2001, 2006, ?).

In order to alleviate the problem arising from the gap in years, parallel materials are revised iteratively (in the years when given material is available) so that the final consumption expenditure estimates derived from them at the end of each year are as compatible as possible with the approved national accounts estimate. Thus, figures for the following year that may be calculated from different data will be founded on a base level that has proved correct.

In this way, the absence of a data source in any statistical year can be compensated in part by integrating data from various sources collected in previous years into calculation items by alternative calculating processes.

The choice of data source is made according to consumer headings. Although supply and demand data available is simultaneously controlled, the basic starting point is to control statistical material that is as closely illustrative as possible of instances of household final consumption expenditure.

The most versatile statistical source for household final consumption expenditure is Statistics Finland's Household Budget Survey. The data it contains about final consumption expenditure by designated consumer heading are adaptable for estimates according to the concepts and definitions used in the national accounts.

The Household Budget Survey needs filling out with additional material that can be utilised in estimating the national accounts. This will be obvious for interim years between surveys. Defining the scale of adjustments and conversions entails recourse to other materials, however. In looking for sources that fill out and supplement Household Budget Surveys, the aim should be towards supply focused materials. It is well to see that the material contents show as clearly as possible the development of household final consumption expenditure. In this regard, the most versatile data source has been Statistics Finland's Business Register, in this context, for turnover by industry with respect to retail trade and service industries.

The versatility of the statistics derives from the fact that the retail trade especially is a critical link for the transfer of products from the distribution point to the point of final consumption. Statistics appear yearly and data are available at a precise level of industry. Use of the statistics and conversion of the data for estimates, according to concepts and definitions in the national accounts, is described below.

Parallel use of the Household Budget Survey and establishment register is described as the basic calculation method (Method A). Because the method frequently requires the support of other methods and sources, even substitute methods, they (Methods B1-Bn) will be separately described wherever their product code requires it in conjunction with reviewing the method in accordance with product classification.

### 5.7.3.2 Method A (Basic calculation method based on Household Budget Survey)

#### Most recent Household Budget Survey as starting point

The method is based on produce-specific data produced from Statistics Finland's Household Budget Survey regarding households' final consumption expenditure (cent/year/household). The most recent calculations rely on surveys in 2001. Data are available in computerised form and are processed by means of spreadsheet computation.

#### Preliminary revision of Household Budget Survey data for calculation purposes

Final consumption expenditure data by item code in the Household Budget Survey are then multiplied by the number of households, resulting in the total final consumption expenditure of all households belonging to the Household Budget Survey population for the whole country for all Household Budget Survey heading codes.

At this stage, a heading link corresponding to the equivalent heading code in the national accounts is added to each consumer heading. If a heading is divided into several headings in the accounts, the headings are given weights in accordance with their distribution. In the case of a single heading code, the weight = 1. Because product distribution in the Household Budget Survey is considerably more detailed than in the national accounts, most instances conform to the latter case.

**Figure 1. Preliminary revision of data. Example.**

			Year 2001		
			1	2	3
<i>National accounts</i>	<i>Household Budget Survey</i>		<i>Consumption expenditure per household</i>	<i>Households in Finland</i>	<i>Households' consumption expenditure, total (unadjusted)</i>
<i>Heading</i>	<i>Code</i>	<i>Heading text</i>	<i>cent</i>	<i>million</i>	<i>EUR mil.</i>
C01211ND Coffee	0121101	Coffee	7 047	2.3815	167.8
C01211ND Coffee	0121102	Instant coffee and instant coffee drinks	369	2.3815	8.8
C01212ND Tea	0121201	Tea	996	2.3815	23.7
C01212ND Tea	0121202	Herbal tea	62	2.3815	1.5
C01212ND Tea	0121203	Instant tea drinks	25	2.3815	0.6
C01213ND Cocoa	0121301	Cocoa and cocoa drinks	473	2.3815	11.3

### Household Budget Survey linked to national accounts nomenclature

By linkage in the above way, data to be found in the Household Budget Survey are converted to (unadjusted) final consumption expenditure in accordance with national accounts nomenclature.

**Figure 2. Household Budget Survey data linked to national accounts nomenclature. Example.**

	Year 2001		
	1	2	3
National accounts	Consumption expenditure per household	Households in Finland	Households' consumption expenditure, total (unadjusted)
Consumption heading	cent	million	EUR mil.
C0121 Coffee, tea and cocoa	8 972		213.7
C01211ND Coffee	7 416	2.3815	176.6
C01212ND Tea	1 083	2.3815	25.8
C01213ND Cocoa	473	2.3815	11.3

### Adjustment: Basic population not covered by the Household Budget Survey

Some adjustments are needed to convert the above final consumption expenditure diagram into an estimate in compliance with the national accounts. The first of these is due to the fact that people living in various institutions are omitted from the Household Budget Survey's base population.

In order to make adjustments, the population count in question is first estimated as the difference between the average national population and the number of persons living in households in the Household Budget Survey's base population. On the basis of data from the Ministry of Social Affairs and Health and the Ministry of Justice, the number of people resident in the various types of institution is investigated. For the residents of each type of institution, an estimate is made of the level and structure of their consumption expenditure in relation to their economic status and consumption potential. From this is derived an estimate of the consumption by product of institutionalised persons. The figures are added to the unadjusted final consumption expenditure data, giving the so-called adjusted final consumption expenditure. The figure still does not include the final consumption expenditure of non-resident households in Finland.

**Adjustment: Bias, random variation, possible differences in concepts and definitions**

Next, adjustments are made for differences arising from bias or random variation and possible differences in concepts and definitions in the Household Budget Survey.

In surveys, a bias generally tends to lower final consumption expenditure. It is not generally possible to counteract the influence of bias on increased sample size. There can be many reasons for bias, for example prevailing attitudes (alcohol and tobacco), selection of respondents and incomplete bookkeeping during response periods. In determining the size of the adjustment factor, the basic presumption is that the bias share of the actual total final consumption expenditure for any heading remains fairly stable from year to year. In order to estimate the extent of bias, comparisons are made with other basic material on final consumption expenditure calculations.

The benefit of increasing the size of the Household Budget Survey sample is a reduction in random variation. In order to fully eliminate its effect on the national accounts, a comparison with other basic material is necessary to discern and adjust any items deviating from the reality.

The effect of bias, random variation and other adjustments described above is shown and added to final consumption expenditure at this juncture. When there is a reason to adjust bias, random variation or other factors, it is given in the form of a comment in the accounting cell.

**Adjustment: Household final consumption expenditure of non-residents in Finland**

Because final consumption expenditure appropriately classified in compliance with the national accounts must include household expenditure by non-residents in Finland, the item in question must be calculated and added to the figures. The total value of such expenditure is to be found in Statistics Finland tourism statistics. In order to partition that value into various headings for such expenditure, use is made of tourism survey reports about how money is spent by non-residents visiting Finland. When the expenditure thus calculated has been added to final consumption expenditure by consumer heading, the result is an adjusted final consumption expenditure estimate derived from Household Budget Survey data in compliance with national accounting concepts.

**Figure 3. Adjustments to Household Budget Survey data. Example**

	Year 2001					
	3	4	5	6	7	8
<b>National accounts</b>	<b>Household final consumption expenditure, total (unadjusted)</b>	<b>Final consumption expenditure of persons not included in the Household Budget Survey (Persons in institutions)</b>	<b>Final consumption expenditure adjusted for population</b>	<b>Adjustment: concepts, definitions, bias, etc.</b>	<b>Adjustment: Household final consumption of non-residents in Finland</b>	<b>Final consumption expenditure calculated from the Household Budget Survey and adjusted to the FNA2005 level</b>

<b>Consumption heading</b>	<b>EUR mil.</b>					
C0121 Coffee, tea and cocoa	213.7	1.9	215.6	26.3	3.2	245
C01211ND Coffee	176.6	1.4	178.0	23.3	2.7	204
C01212ND Tea	25.8	0.2	26.0	0.6	0.4	27
C01213ND Cocoa	11.3	0.2	11.5	2.4	0.1	14

**Comparison and reconciliation: Final consumption expenditure estimates derived from Household Budget Surveys and other sources**

When final consumption expenditure estimates derived from Household Budget Surveys are obtained, a comparison is made and reconciliation reached between various final consumption expenditure estimates systematically derived from data in the Business Register and other possible sources in order to select an approved final consumption expenditure estimate. In this case, a comparison was made with data available for 2001, while utilising data accruing from earlier years.

The final consumption figure chosen as the best is shown in the last column. If the estimate chosen differs from figures derived from the Household Budget Survey, comments are made in the cells about the data source and the basis for selecting it.

**Figure 4. Comparison: Final consumption expenditure estimates derived from Household Budget Surveys and other sources. Example.**

	<b>Year 2001</b>		
	<b>8</b>	<b>9</b>	
<b>National accounts</b>	<b>Final consumption expenditure calculated from the Household Budget Survey and adjusted to the FNA2005 level</b>	<b>Comparison: FNA2005 household final consumption expenditure</b>	
<b>Consumption heading</b>	<b>EUR mil.</b>	<b>EUR mil.</b>	<b>Note</b>
C0121 Coffee, tea and cocoa	245	245	Because what is involved concerns a final estimate for 1998 derived from the parallel control of materials, the column figures are identical
C01211ND Coffee	204	204	-"-
C01212ND Tea	27	27	-"-
C01213ND Cocoa	14	14	-"-

### Statistical data from the Business Register as source

The systematic use of data in the Business Register is shown as applying to 2004.

The flow of products from producer to consumer will show that the retail trade is a crucial link in the transfer of products from distribution point to final consumption point. It is worthwhile using data reflecting sales in retail trade as source data to derive consumption expenditure estimates. Source data consist of turnover data proper to establishments from various industries, available from Statistics Finland's Business Register. Some of the equivalent turnover data from particular service industries are also quite useful. Turnover data for establishments by industry are available for all industries at the most precise classification level.

### Partitioning of industry turnover data by individual product

Industry turnover data by establishment form the basis of final consumption expenditure calculations that avail of trade and service industry data. Because the partition of turnover among products is not recorded in industry statistics, individual product sales in each industry must be estimated as accurately as possible to help calculate final income expenditure. This occurs by an iterative process each year, using data supplied by trade organisations and commercial groups regarding sales distribution and data about demand. The exact division of industries in the establishment register facilitates product distribution. This is expressed both in marks and as a percentage share of industry turnover so that it can serve as a framework for product distribution in the next statistical year.

**Figure 5. Turnover by individual product according to the Business Register, in 2004. Example.**

	<i>52111 Retail sale in supermarkets</i>	<i>52112 Retail sale of perishable goods in non-specialized stores</i>	<i>52121 Retail sale in self-service department stores</i>	<i>52122 Retail sale in self-service department stores</i>	<i>Other industries</i>	<i>Official sales of industries excl. taxes, total</i>
<b>Turnover (EUR mil)</b>	4 837	3 145	2 801	998		
<b>Distribution by product (%):</b>						
C0121 Coffee, tea and cocoa						
C01211ND Coffee	1.2	1.2	1.2	0.9		
C01212ND Tea	0.2	0.3	0.2	0.2		
C01213ND Cocoa	0.1	0.1	0.1	0.1		

<i>Distribution by product (EUR mil.):</i>						
C0121 Coffee, tea and cocoa						193
C01211ND Coffee	57	38	34	9	11	148
C01212ND Tea	12	9	6	2	2	30
C01213ND Cocoa	7	4	3	1	1	16

### *Adjustments in sales data by individual product entailed by final consumption expenditure*

Turnover by individual product as described above provides only the starting point for revising data on household final consumption expenditure. Certain adjustments must be made to reach a commensurate final consumption expenditure, as follows:

Value-added-type taxes by individual product and other taxes directly based on the sales amount are added to the untaxed total (taxes are not levied on tax-free purchases by tourists from outside the EEA).

An increment is added for unaccounted sales of products.

The share of the retail trade (and sales of services) for each product going to households is estimated.

In order to assess total final consumption expenditure for households, an increment is added for the value of household purchases of products from elsewhere than the controlled industries.

**Figure 6. From turnover of establishment register to household final consumption expenditure in 2004. Example.**

	<i>Official sales of industry without tax</i>	<i>of which tax-free purchases by non-EEA tourists</i>	<i>VAT %</i>	<i>Other taxes directly based on volume of purchases</i>	<i>Official taxable purchases of industries, total</i>	<i>Purchases not entered in relation to entered purchases</i>	<i>Household final consumption expenditure of sales</i>	<i>Household purchases of given industries</i>	<i>Household purchases from elsewhere</i>	<i>Household final consumption expenditure of sales in the Business Register</i>	<i>Comparison with FNA 2000 Household final consumption expenditure</i>
	EUR mil.	EUR mil.		EUR mil.	EUR mil.	Proportion	Proportion	EUR mil.	EUR mil.	EUR mil.	EUR mil.
C0121 Coffee, tea and cocoa	193				226			213		213	213
C01211ND Coffee	148	0	17	0	173	0	0.935	162	0	162	162
C01212ND Tea	30	0	17	0	35	0	0.942	33	0	33	33
C01213ND Cocoa	16	0	17	0	18	0	1	18	0	18	18

The result is an estimate of household final consumption expenditure derived from the Business Register. In order to reach a conclusive estimate in compliance with the national accounts, the figures are compared with equivalent final consumption expenditure estimates and a choice is made based on the comparison.

### *Comparison and reconciliation: Final consumption expenditure estimates derived from various sources*

No Household Budget Surveys were produced for the years 2002 to 2004 so that comparison of expenditures and conclusive reconciliation of final consumption expenditure had to be produced in a way other than when such material was available.

In order to alleviate the problem of the years between Household Budget Surveys, parallel materials were revised reiteratively in 2001 so that final consumption expenditure estimates for the year in question derived from various materials are as compatible with the approved national accounts estimate as possible. This was achieved by looking for causes of discrepancies between estimates and making the necessary adjustments in the appropriate items. Thus, the figures for 2004 calculated for any individual material base, for example, rely on the certifiably correct consumption base level of 2001 and a relative scale was defined for adjusting items by means of comparison with the material from previous years, so that in cases where data are incomplete, the estimate for 2004 can be regarded as a basis for these items.

#### *5.7.3.3 Method B (Share of output)*

##### *Production accounts in the national accounts as a starting point*

In the case of many products – this applies especially to services – calculation can be based on continual utilisation of production accounts in the national accounts. In these instances too, the base level of final consumption expenditure must be defined using parallel consumption data sources (i.e. Household Budget Surveys) whenever feasible.

In this method, the industries producing each product under review are first investigated by sector. Then, from the output of the industries in each sector, the share allocated to household final consumption expenditure is derived, as follows:

<b>Industry 1, Industry 2, Industry 3...</b>
<b>Output at basic prices</b>
Distribution of output by product:
<b>Product 1, product 2, product 3...</b>
<b>Distribution of product by use</b>
Other use than consumption
Public final consumption expenditure
Final consumption expenditure of non-profit corporations
<b>Household final consumption expenditure at basic prices</b>
plus value-added tax and other taxes on products, net
<b>= Household final consumption expenditure at purchasers' prices</b>

A calculation by industry can be compiled and added up for household final consumption expenditure of any product to be controlled:

**Household final consumption expenditure of each product is obtained by adding together the final**

<b>consumption expenditure of all industries for the product in question</b>
Product 1; household final consumption expenditure for all industries
Product 2; household final consumption expenditure for all industries
Product 3; household final consumption expenditure for all industries
...

Whenever possible, comparison and reconciliation of the final consumption expenditure thus obtained is done with other materials; in this case, with the Household Budget Survey:

<b>Comparison and reconciliation in years when the Household Budget Survey is available:</b>
<b>Product 1 calculated by distribution method of output</b>
plus/minus adjustments due to differences in base populations, etc.
<b>= Product 1, Household Budget Survey data</b>

Examples of applying the method to calculating final consumption expenditures are shown in conjunction with reviewing the method for heading purposes.

#### 5.7.3.4 Other B Methods

Other data sources and methods than described above are utilised in relation to many consumer headings and methods. In every case, efforts are made to achieve as exhaustive a comparison of materials as feasible. Such methods are individually described where their product code requires in conjunction with reviewing the method in accordance with product classification.

#### 5.7.3.5 Supply and use tables; balancing the resources and expenditure summary

The final national accounts are prepared in accordance with the supply and use tables. The adjustments to the final consumption expenditure calculations they entail are allocated to calculation items as the method requires.

Defining the preliminary level of household final consumption expenditure occurs as a result of the balancing of the resources and expenditure summary.

The process of summarising the national accounts is described in Chapter 6.

#### 5.7.4 Calculation by heading

Calculation of figures for each consumer heading at current prices for 2004 is shown. Calculation of the volume of products at constant prices is shown wherever it supports the calculation of the corresponding figure at current prices.

#### C01 FOOD AND NON-ALCOHOLIC BEVERAGES

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C01 FOOD & NON-ALCOHOLIC BEVERAGES	9 380	x																	



C012 Non-alcoholic beverages	814	x																	
C0121 Coffee, tea and cocoa	213	x																	
C01211ND Coffee	162		x		x				x	x									
C01212ND Tea	33		x						x	x									
C01213ND Cocoa	18		x						x	x									
C0122 Mineral waters, soft drinks & juices	601	x																	
C01221ND Mineral waters and soft drinks	426		x		x				x	x									
C01222ND Juices	175		x		x				x	x									

Additional sources used are classified in Section 5.7.2 (Data sources).

## C02 ALCOHOLIC BEVERAGES, TOBACCO AND DRUGS

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C02 ALCOHOLIC BEVERAGES, TOBACCO AND DRUGS	3 902	x																	
C021 Alcoholic beverages	2 681	x																	
C0211 Alcoholic beverages	752	x																	
C02110ND Alcoholic beverages	752			x (B/C021)								x							
C0212 Wine, cider, long drinks	795	x																	
C02120ND Wine, cider, long drinks	795			x (B/C021)								x							
C0213 Beer	1 134	x																	
C02130ND Beer	1 134			x (B/C021)								x							
C022 Tobacco	1 221	x																	
C0220 Tobacco	1 221	x																	
C02200ND Tobacco	1 221			x (B/C022)									x						
C023 Drugs	0	x																	
C0230 Drugs	0	x																	
C02300ND Drugs				Product not included in calculation															

<b>B/C021</b>	
	<b>2004</b>
Yearbook of alcohol and drugs (STAKES):	
<b>Value of retail consumption of alcoholic beverages, EUR 1 000</b>	
Spirits	382 517
Other spirituous beverages	238 280
Fortified wines	57 990
Mild wines	577 873
Long drinks	84 632
Strong beer	57 465
Medium beer	969 668
<b>Total (grouped by accounting heading):</b>	<b>2 368 425</b>
C02110ND Alcoholic beverages, EUR 1 000	620 797
C02120ND Wine, cider, long drinks, EUR 1 000	720 495
C02130ND Beer, EUR 1 000	1 027 133
<b>Share of retail consumption used by enterprises and institutions:</b>	
C02110ND Alcoholic beverages	0.01
C02120ND Wine, cider, long drinks	0.01
C02130ND Beer	0.01
<b>Retail consumption less consumption used by enterprises and institutions:</b>	
C02110ND Alcoholic beverages, EUR 1 000	614 589
C02120ND Wine, cider, long drinks, EUR 1 000	713 290

C02130ND Beer, EUR 1 000	1 016 862
<b>Alcoholic beverages imported by tourists, from separate calculations:</b>	
Sales of alcoholic beverages on board vessels total in EUR 1 000, of which:	173 368
C02110ND Alcoholic beverages	93 122
C02120ND Wine, cider, long drinks	40 123
C02130ND Beer	40 123
Sales of alcoholic beverages on board aircraft EUR 1 000, of which:	6 458
C02110ND Alcoholic beverages	4 323
C02120ND Wine, cider, long drinks	1 761
C02130ND Beer	374
Sales of alcoholic beverages on board vessels & aircraft EUR 1 000, of which:	179 826
C02110ND Alcoholic beverages	97 445
C02120ND Wine, cider, long drinks	41 884
C02130ND Beer	40 497
<b>Trade in illegally imported alcohol:</b>	
Yearbook of alcohol and drugs Table 2: Illegal distillation and transportation, millions of litres	1.33
Household purchases of amount, %	30
Household purchases of amount, millions of litres	0.4
Price of illegal spirits on street, estimate based on customs handouts (EUR/l)	12.71
For household final consumption expenditure, EUR 1 000	5 056
<b>Brewery statistics:</b>	
Beer Max. 2.8 vol. %, domestic sales (including brewery imports) 1 000 litres	8 445
Beer Max 2.8 vol. %, sales share purchased by households	0.75
Beer 2.8 vol. %, amount purchased by households, 1 000 litres	6 334
Beer 2.8 vol. %, average price to consumer (EUR/litre)	1.55
Beer 2.8 vol. %, sales to households, EUR 1 000	9 819
Soft drinks, domestic sale, 1 000 litres	274 906
Soft drinks containing alcohol (1.2-2.8 vol. %), share of all soft drinks (estimate)	0.01
Soft drinks containing alcohol (1.2-2.8 vol. %), sales 1 000 litres	2 749
Soft drinks containing alcohol (1.2-2.8 vol. %) average consumer price, EUR/litre	1.55
Soft drinks containing alcohol (1.2-2.8 vol. %) sales to households, EUR 1 000	4 262
<b>Balancing with supply and use table level:</b>	
C02110ND Alcoholic beverages, EUR mil.	+35
C02120ND Wine, cider, long drinks, EUR mil.	+36
C02130ND Beer, EUR mil.	+67
Total of above:	
<b>C021 Alcoholic beverages, EUR mil.</b>	<b>2 681</b>
C0211 Alcoholic beverages, EUR mil.	752
C02110ND Alcoholic beverages, EUR mil.	752
C0212 Wine, cider, long drinks, EUR mil.	795
C02120ND Wine, cider, long drinks, EUR mil.	795
C0213 Beer, EUR mil.	1 134
C02130ND Beer, EUR mil.	1 134

<b>B/C022</b>	
	<b>2004</b>
<b>Tobacco statistics (National Agency for Welfare and Health &amp; Statistics Finland):</b>	
Retail sales value of tobacco products (including imports) delivered for taxable consumption, EUR mil.	1 069
Share of retail consumption used for entertainment	0.001
Value of share of retail consumption used for entertainment, EUR mil.	1 068
<b>Tobacco brought by tourists, from separate calculations:</b>	
On board vessels, EUR mil.	28

On board aircraft, EUR mil.	3
Tax-free total, EUR mil.	31
<b>Balancing with supply and use table level, incl. estimate of trade in illegally imported tobacco</b>	
Balancing item, EUR mil.	122
<b>C022 Tobacco, total EUR mil.</b>	<b>1 221</b>

### C03 CLOTHING AND FOOTWEAR

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C03 CLOTHING AND FOOTWEAR	3 574	x																	
C031 Clothing	2 969	x																	
C0311 Fabrics	78	x																	
C03110SD Fabrics	78		x						x	x									
C0312 Garments	2 654	x																	
C03121SD Outdoor clothing	2 181		x						x	x									
C03122SD Underwear	473		x						x	x									
C0313 Accessories and articles of clothing	193	x																	
C03131SD Yarn, etc.	58		x						x	x									
C03132SD Hats, ties, scarves, gloves, etc.	135		x						x	x									
C0314 Garment repair and hire	44	x																	
C03140S Garment repair and hire	44		x																
C032 Footwear	605	x																	
C0321 Footwear and footwear supplies	586	x																	
C03210SD Footwear and footwear supplies	586		x						x	x									
C0322 Footwear repair and hire	19	x																	
C03220S Footwear repair and hire	19		x																

### C04 DWELLING, WATER, ELECTRICITY, GAS AND OTHER FUELS

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C04 DWELLING, WATER, ELECTRICITY, GAS AND OTHER FUELS	19 015	x																	
C041 Actual rents	4 962	x																	
C0410 Actual rents	4 962	x																	
C04100S Actual rents	4 962			x (B/C04)															
C042 Imputed rents	12 253	x																	
C0420 Imputed rents	12 253	x																	
C04200S Imputed rents	12 253			x (B/C04)															
C043 Maintenance an repair of dwellings	25	x																	
C0431 Products related to maintenance and repair of dwellings	25	x																	
C04310ND Products related to maintenance and repair of dwellings	25			x (B/C04)															
C0432 Services related to maintenance and repair of dwellings		x																	
C04320S Services related to maintenance and repair of dwellings				x (B/C04)															
C044 Other dwelling related services	241	x																	
C0441 Water		x																	
C04410ND Water				x (B/C04)															
C0442 Refuse collection		x																	
C04420S Refuse collection				x (B/C04)															
C0443 Waste water		x																	

C04430S Waste water				x (B/C04)															
C0444 Other dwelling related services	241	x																	
C04440S Other dwelling related services	241			x (B/C04)															
C045 Electricity, gas and other fuels	1 534	x																	
C0451 Electricity	1 107	x																	
C04510ND Electricity	1 107			x (B/C04)															
C0452 Gas		x																	
C04520ND Gas				x (B/C04)															
C0453 Liquid fuels	262	x																	
C04530ND Liquid fuels	262			x (B/C04)															
C0454 Solid fuels	139	x																	
C04540ND Solid fuels	139			x (B/C04)															
C0455 Hot water, steam and ice	26	x																	
C04550ND Hot water, steam and ice	26			x (B/C04)															

### *Main features and sources of calculations*

The starting point for calculating consumption related to households' dwelling is Industry 7021, Ownership and letting of dwellings. Industry output includes market output – the gross rents on rental dwellings – and output for own final use – the imputed gross rents on owner-occupied dwellings estimated using the corresponding market for such dwellings rented. Households consume the total output of the industry in the form of dwelling services. The output of Industry 7021 is calculated by using the so-called stratification method, as the income of the dwelling stock divided into categories and the income per square metre corresponding to those categories. The income per square metre is to be found in Statistics Finland's rent statistics.

In rent statistics, the concept of rent includes separately payable water and heating charges in addition to the actual rent. It does not include other dwelling related user fees, among them sauna, laundry etc. or other fees, such as charges for electricity and telephone. In calculating Industry 7021 output, gross rents for detached small houses do not include heating charges.

In conjunction with the reform of supply and use tables, the proportion between Industry 7021 'Ownership and letting of dwellings' and the dwelling costs of private final consumption was altered. According to the new calculation method, the items 'water supply', 'waste water', 'refuse collection', 'other dwelling related costs' and 'electricity, gas and other fuels' are recorded as actual and imputed dwelling rents whenever they are included in tenant rents and owner occupier services charges. If paid separately, they are recorded as separate items also in the new calculation system. In the old calculation system, the items in question were separated from the actual and imputed rents each time they were included tenant rents and owner occupier services charges. Justification for the change lay in the greater simplicity of the calculations.

**Table 49. Treatment of heating, water supply, refuse collection and waste water in the final consumption expenditure of dwellings and in Industry '7021 Ownership and letting of dwellings'**

	Industry 7021		Private consumption	
Blocks of flats and	Included	Economic activity	Included	Economic activity

attached houses				
Heating	Yes	P1, P2	Yes	Actual and imputed rents
Water supply	Yes	P1, P2	Yes	Actual and imputed rents
Refuse collection	Yes	P1, P2	Yes	Actual and imputed rents
Waste water	Yes	P1, P2	Yes	Actual and imputed rents

	Industry 7021		Private consumption	
Detached small houses	Included	Economic activity	Included	Economic activity
Heating	No	-	Yes	Electricity, gas and other fuels
Water supply	Yes	P1, P2	Yes	Actual and imputed rents
Refuse collection	Yes	P1, P2	Yes	Actual and imputed rents
Waste water	Yes	P1, P2	Yes	Actual and imputed rents

As the table shows, expenditure on heating, water supply, refuse collection and waste water is included in private consumption expenditure of dwellings generally as actual and imputed rents. Heating costs in the case of detached small houses are reflected as direct energy costs (which are an exception) in the final consumption expenditure of dwellings as well.

#### *C041 Actual rents*

Actual rents comprise the actual rents of dwellings and holiday homes. Their gross value is equal to the market output of Industry 7021 'Ownership and letting of dwellings'. **The actual rents of dwellings** (excluding holiday homes) are obtained by stratification calculations.

**The actual rents of holiday homes**, i.e. the rent for holiday homes that are rented, are calculated from data in the Household Budget Survey (final consumption expenditure, EUR/household multiplied by the number of households). Rent comprises the rent, the interest on the loan and the land rent.

#### *C042 Imputed rents*

Imputed rents comprise the imputed rents of owner-occupied dwellings and of holiday homes in use by their owners. Their gross value is the output for own final use of Industry 7021 'Ownership and letting of dwellings'. The actual rents of dwellings (excluding holiday homes) are obtained by stratification calculations.

The imputed rents of holiday homes are calculated from Household Budget Survey data (final consumption expenditure, EUR/household x number of households). Imputed rents comprise repair costs, water and waste water charges, fire insurance (service financial statistics share), refuse collection charges, chimney cleaning, etc. and other charges, and heat, light and power. To the imputed rents of holiday homes, i.e. the output of owner-occupied holiday homes, are also added in proportion to the dwellings a share of the consumption of fixed capital in Industry 7021.

#### *C043 Products related to maintenance and repair of dwellings and services*

Costs related to maintenance and repairs of a minor nature which the tenant or owner-occupier carries out or orders are treated as private final

consumption expenditure. Such costs are divided into two groups: the cost of products related to dwelling maintenance, and repair and services related to dwelling maintenance and repair.

According to the SNA93 and ESA 95, classification of individual consumption by purpose for households, or COICOP, **products related to dwelling maintenance and repair** (C0431) consist of paint, varnishes, wallpaper, window glass, mortar, putty, cement, wall and floor tiles, etc. **Services related to dwelling maintenance and repair** (C0432) consist of the services of plumbers, electricians, carpenters, painters, etc.

The costs of products or services related to the maintenance and repair of dwellings are calculated from **Household Budget Survey** data about repairs done by tenants (consists of repairs to and maintenance of rental dwellings and dwellings which are a benefit in kind). Products related to maintenance and repair of dwellings are not included in gross rents. The cost of services related to such maintenance and repair is included in Industry 7021, Ownership and renting of dwellings, intermediate consumption and, therefore, the item in question is not counted as private final consumption.

#### *C044 Other dwelling related services*

Other dwelling services are **Water** (C0441), **Refuse collection** (C0442), **Waste water** (C0443) and **Other dwelling related services** (C0444).

Water, in the sense of COICOP, consists of dwelling water supply and drainage but not hot water or steam from a district heating enterprise. Refuse collection consists of the collection and treatment of waste. Waste water consists of the collection and treatment of waste water. Other dwelling related services (C0444) are janitor services, maintenance of green areas, cleaning and lighting of stairwells, maintenance of lift shafts and refuse disposal chutes, security services, snow removal and chimney sweeping.

The consumption items Water supply (C0441), Refuse collection (C0442) and Waste water (C0443) are included in actual and imputed rents.

In the item Other dwelling related services (C0444) are entered the sauna and laundry charges, etc., of housing companies, housing corporation and directly leased dwellings. This expense item is calculated by means of the square metre costs in the accounts statistics of housing corporations and the number of square metres in the dwelling stock.

#### *C045 Electricity, gas and other fuels*

Dwelling energy costs are classified under five headings: **electricity** (C0451), **gas** (C0452), which in the COICOP definition includes town gas, natural gas, butane, propane, etc., **liquid fuels** (C0453), which include fuel oil for heating and lighting, **solid fuels** (C0454), which include coal, coke, briquettes, firewood, charcoal, turf, etc., and **hot water, steam and ice** (C0455), i.e. hot water and steam for heating and ice for cooling. Electricity, gas, hot water and steam from district heating enterprises, and ice charges include the cost of renting and reading meters.

In the new calculation method, the heating costs of housing corporations are recorded in both actual and imputed rents. Where detached small houses are concerned, energy costs are calculated on data in Household Budget Surveys.

The Household Budget Survey electricity is calculated from the items electricity, lighting and power as benefits in kind; gas is calculated from the item gas, liquid fuel from the item fuel oil, solid fuels from the items own logs and delivered logs, waste wood and turf; hot water, steam and ice from the items separately billed hot water charge, and other heating expenses and district heating. Except for electricity, energy costs consist of heating costs for detached small houses (single family houses), which are not therefore included in gross rents of Industry 7021. Electricity includes household electricity and electric heating energy for detached small houses. Household electricity is that paid for directly to electricity companies. Household electricity is not included in gross rents of Industry 7021.

### C05 DECORATION, HOUSEHOLD EQUIPMENT & HOME MANAGEMENT

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C05 FURNISHINGS, HOUSEHOLD EQUIPMENT & HOUSEHOLD CARE	3 937	x																	
C051 Furniture, interior decoration, carpets and other floor coverings	1 486	x																	
C0511 Furniture and interior decoration	1 260	x																	
C05111D Furniture and interior decoration	902		x																
C05112D Garden, etc. exterior furniture	80		x																
C05113D Lamps and lighting fittings	68		x																
C05114D Objets d'art	119		x																
C05115D Ornaments & furnishing articles, mirrors	91		x																
C0512 Carpets and other floor coverings	127	x																	
C05120D Carpets and other floor coverings	127		x																
C0513 Furniture and other repairs	99	x																	
C05130S Furniture and other repairs	99		x																
C052 Household textiles	425	x																	
C0521 Household textiles	425	x																	
C05211SD Textiles	357		x																
C05212SD Mattresses	56		x																
C05213S Repair of household textiles	12		x																
C053 Domestic appliances	691	x																	
C0531 Large domestic appliances	571	x																	
C05311D Ovens, stoves and sauna stoves	19		x																
C05312D Refrigerators and freezers	159		x										x						
C05313D Washing machines, dryers and dishwashers	218		x										x						
C05314D Sewing machines	24		x																
C05315D Electric cookers, microwave ovens, vacuum cleaners	151		x										x						
C0532 Small electric domestic appliances	60	x																	
C05320SD Small electric domestic appliances	60		x										x						
C0533 Repair of domestic appliances	60	x																	
C05330S Repair of domestic appliances	60		x																
C054 Glassware, cutlery and household utility articles	296	x																	
C0541 Glassware, cutlery and household utility articles	296	x																	
C05411SD Dishes, cooking vessels, etc.	146		x																
C05412SD Cutlery and cooking utensils	59		x																
C05413SD Other household utensils	76		x																
C05414S Repair of household utensils	15		x																

C055 Tools and equipment for home and garden care	339	x																		
C0551 Gardening and other machines	124	x																		
C05510D Gardening and other machines	124		x																	
C0552 Hand tools and accessories	215	x																		
C05521SD Household utility articles and tools	126		x																	
C05522SD Small electrical accessories	89		x																	
C056 Goods and services for household care	700	x																		
C0561 Household short-term consumer goods	530	x																		
C05611ND Washing, cleaning and other materials	206		x																	
C05612ND Insecticides and other poisons	28		x																	
C05613ND Paperware and plastic goods	163		x																	
C05614ND Other disposable goods	133		x																	
C0562 Household services	170	x																		
C05620S Household services	170																			x (B/share of output)

## C06 HEALTH

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C06 HEALTH	3 075	x																	
C061 Medical products, equipment and instruments	1 329	x																	
C0611 Medicaments	895	x																	
C06110ND Medicaments	895			x (B/C0611)										x	x				
C0612 Other pharmaceutical products	40	x																	
C06120ND Other pharmaceutical products	40		x																
C0613 Therapeutic equipment and instruments	394	x																	
C06131D Spectacles and contact lenses, prostheses and hearing aids	372		x																
C06132D Other therapeutic equipment and instruments	22		x																
C062 Out-patient care services	1 255	x																	
C0621 Medical services	467	x																	
C06210S Medical services	467			x (B/share of output)										x	x				
C0622 Dental services	498	x																	
C06220S Dental services	498			x (B/share of output)										x	x				
C0623 Other out-patient care services	290	x																	
C06230S Other out-patient care services	290			x (B/share of output)										x	x				
C063 Hospital services	491	x																	
C0630 Hospital services	491	x																	
C06300S Hospital services	491			x (B/share of output)										x	x				

Sickness insurance compensation for medical services and medicaments are not included in household final consumption expenditure. They are recorded as final consumption expenditure of social security funds. Cf. examples of calculations for final consumption expenditure of health care contributions and medicaments.

<b>B/C0611</b>			
		<b>2004</b>	
Sales of medicaments to households for out-patient care, EUR mil.	+	1 910	Data based on pharmacy industry sales of medicaments to households, Cf. Method A.
Compensation for medicaments, EUR mil.	-	1 051	
<b>Household final consumption expenditure for medicaments, EUR mil.</b>		<b>895</b>	
<b>Health care payments</b>			
			<b>2004</b>
<b>National Accounts Out-patient care and hospital fees, total EUR mil.</b>			2 351
Social current transfers to the health services in the form of benefits in kind, EUR mil.			605
<b>National Accounts Out-patient care and hospital fees, total excl. compensation by the Social Insurance Institution (KELA), EUR mil.</b>			1 746
KELA: Structure of household out-patient care and hospital fees:			
- medical services, %			26.8
- dental services, %			28.5
- other out-patient care services, %			16.6
- hospital (ward) services, %			28.1
National Accounts Household final consumption expenditure, EUR mil.:			
<b>C06210S Medical services</b>			467
<b>C06220S Dental services</b>			498
<b>C06230S Other out-patient care services</b>			290
<b>C06300S Hospital services</b>			491
Total			1 746

## C07 TRANSPORT

The method is based on use of the calculation items in the production account of the transport industry as indicators of final consumption expenditure. The Household Budget Survey is used as comparative data for determining consumption levels.

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C07 TRANSPORT	9 549	x																	
C071 Purchase of vehicles	3 443	x																	
C0711 Motor cars	3 160	x																	
C07110D Motor cars	3 160			x (B/C0711)												x			
C0712 Motor cycles and snowmobiles	141	x																	
C07120D Motor cycles and snowmobiles	141		x														x		
C0713 Bicycles	142	x																	
C07130D Bicycles	142		x																
C072 Operation of personal transport equipment	4 422	x																	
C0721 Spare parts and accessories	726	x																	
C07211SD Tyres	225		x																
C07212SD Other spare parts or accessories	501		x																
C0722 Fuels and lubricants	2 532	x																	
C07220ND Fuels and lubricants	2 532			x (B/Transport)															
C0723 Maintenance and repair of personal	728	x																	



<b>Balancing to supply and use table level, EUR mil.</b>		+54	
<b>PRICES</b>		..	
Household list price as new (EUR 1 000)	Motor car Information Centre and unit value	23.95	
Percentage of list price paid by households, %	Estimate	98	
Average price paid by households, EUR 1 000		23.471	
<b>C07110D Motor cars, EUR mil.</b>		3 160	

<b>x (B/Transport)</b>	
<b>Example: Passenger transport by sea and inland waterways</b>	
	<b>2004</b>
Passenger income from domestic transport, excl. VAT EUR 1 000	15 555
Household final consumption expenditure: Passenger income from domestic transport, incl. VAT, EUR 1 000	16 800
Passenger income from Finnish vessels operating in rest of world, EUR 1 000	216 260
-of which household final consumption expenditure	85
Household final consumption expenditure: Passenger income from foreign transport	183 821
<b>Total: C07340S Passenger transport by sea and inland waterways, EUR mil.</b>	<b>201</b>

### C08 COMMUNICATION

	Year 2004																			
	Value		Basic accounting method		Additional sources used															
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C08 COMMUNICATION	2 452	x																		
C081 Communication	2 452	x																		
C0811 Postal services	77	x																		
C08110S Postal services	77			x (B/Transport)																
C0812 Communication equipment	212	x																		
C08120D Communication equipment	212		x											x						
C0813 Communication services	2 163	x																		
C08130S Communication services	2163			x (B/Transport)																

### C09 RECREATION AND CULTURE

	Year 2004																			
	Value		Basic accounting method		Additional sources used															
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C09 RECREATION AND CULTURE	8 424	x																		
C091 Audio-visual, photographic and information processing equipment	1 305	x																		
C0911 Equipment for the reception, recording and reproduction of sound and pictures	548	x																		
C09111D Radios, sound recording equipment, etc.	154		x										x							
C09112D Television sets, video cassette players and recorders,	368		x										x							
C09113SD Electronic entertainment and music goods parts and accessories	26		x																	



				(B/C0943)															
C095 Newspapers, books and stationery	1 298	x																	
C0951 Books	276	x																	
C09510SD Books	276		x																
C0952 Newspapers and periodicals	884	x																	
C09520ND Newspapers and periodicals	884			x	(B/C0952)													x	
C0953 Miscellaneous printed matter	83	x																	
C09530ND Miscellaneous printed matter	83		x																
C0954 Stationery and drawing materials	55	x																	
C09540ND Stationery and drawing materials	55		x																
C096 Package tours	827	x																	
C0960 Package tours	827	x																	
C09600S Package tours	827			x	(B/Transport)														

<b>x (B/C09142&amp;C09421)</b>		
		<b>2004</b>
Source: Statistics Finland/Finnish Mass Media		
<b>Recorded videos and DVDs</b>		
Hired video recordings, EUR mil.		10
- of which for households, %		100
- of which for households, EUR mil.		10
Hired DVD recordings, EUR mil.		23
- of which for households, %		100
- of which for households, EUR mil.		23
Purchased video recordings, EUR mil.		22
Purchased DVD recordings, EUR mil.		86
Purchased total, EUR mil.		108
- of which for households, %		71
- of which for households, EUR mil.		77
Illegally purchased as a percentage of legally purchased, %		2
Addition: Illegally purchased, EUR mil.		2 *) Most so-called illegal items are purchased in the rest of the world which means they do not come under this heading, but under tourist expenditure
<b>Other recordings:</b>		
Retail sales, total, EUR mil.		110
- of which for households, %		71
- of which for households, EUR mil.		78
Illegally purchased as a percentage of legally purchased, %		2
Addition: Illegally purchased, EUR mil.		2 *)
<b>Unrecorded recording equipment:</b>		
Sound cassettes, etc., EUR mil. (Households)		2
Video cassettes, etc., EUR mil. (Households)		35
Television and video equipment for hire, % of video recording rents		14
<b>C09142SD Records, audio and videocassettes</b>		<b>194</b>
<b>C09421S Hire of televisions, videos, etc.</b>		<b>38</b>

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<b>x (B/C09422)</b>		
	<b>2004</b>	
Number of television licences, 1000	2 003	Source: YLE Broadcasting Company Annual Report
Annual television licence fee, EUR	188	Based on a Government statute
Imputed television licence fees accruing annually, EUR mil.	376	
<b>Television licences collected , EUR mil.</b>	386	Data from TV fee administration. VAT on fee = 0%. (Yleisradio then pays VAT at 8% on money it gets in fees from the government TV and radio fund)
Number of households, 1000 units	2 413	Statistics Finland: Income distribution statistics and Household Budget Survey
Households owning one or more televisions, %	96	Statistics Finland: Finnish Mass Media
Households owning one or more televisions, 1000 households	2 316	
Households owning a television but no licence, %	16	FICORA television licence administration's estimate
Households owning television licences, 1000	1 950	
Household share of all television licences, %	97	
<b>Household television payments, total EUR mil.</b>	376	
<b>Cable television activities:</b>		
(Part of expenditure reflected in rental payments)		
Pay-per-view TV income (part of turnover of Cable TV companies)	32	Statistics Finland: Finnish Mass Media
Pay-per-view TV, VAT %	22	
Pay-per-view TV as taxed, total EUR mil. (households 100%)	39	
<b>Other television payments</b>		
Other payments by households (incl. interactive programmes)	5	Information hard to find: Estimate tied to percentage of cable TV subscription payments.
Other payments by households (incl. interactive programmes) VAT %	22	
Other payments by households (incl. interactive programmes). EUR mil.	6	
<b>Total, EUR mil.</b>	<b>420</b>	
<b>x (B/C0943)</b>		
		<b>2004</b>
<b>Finnish Slot Machine Association (RAY)</b>		
Turnover from casinos and gaming machines, EUR mil.	+	635
<b>Åland Slot Machine Association (PAF)</b>		
Turnover from PAF concern, EUR mil.		48
-of which gaming machines in Finland's territorial area (especially in Åland) incl. ships, %		50
-for final consumption expenditure EUR mil.	+	24
Estimate of amount of Finland's final consumption expenditure going on PAF Internet games	+	4
Turnover of other PAF type gaming practices in Finland's territorial area (especially in Åland)	+	1.4
- deduct the value of winnings from the above	-	1
<b>Gaming machines on board ship (not operated by RAY/PAF)</b>		
From separate calculations of transport on sea or inland waterway, EUR mil.	+	7
<b>(Veikkaus Oy)</b>		
Gaming turnover, EUR mil.	+	1 261
Players' winnings, EUR mil.	-	631
<b>Fintoto Oy</b>		
Turnover of tote gambling, EUR mil.	+	175
Players' tote winnings, EUR mil.	-	128
<b>Bingo</b>		
Turnover, EUR mil.	+	116
Value of winnings in relation to turnover, %		72
Value of winnings, EUR mil.	-	83

<b>Balancing items and other items, EUR mil.</b>		<b>23</b>
<b>Household final consumption expenditure, EUR mil.</b>	<b>=</b>	<b>1401</b>
<b>x (B/C0952)</b>		
		<b>2004</b>
Sources: Statistics Finland/Finnish Mass Media (and its basic data sources)		
<b>NEWSPAPERS</b>		
Newspapers, turnover, EUR mil.		<b>1 088</b>
Distribution of newspaper profits:		
Subscriptions and single copy sales, %		44
Subscriptions and single copy sales, %, EUR mil.		479
Distribution of newspaper sales:		
Subscriptions, %		85
Single copy sales, %		15
Subscriptions, EUR mil.		407
Single copy sales, EUR mil.		72
Finnish newspaper subscriptions:		
Household share of subscriptions, %		87
Household share of subscriptions, EUR mil.		355
Value-added tax, %		0
Subscriptions to newspapers (households), EUR mil.		355
Subscriptions to rest-of-the-world newspapers:		
Subscription to rest-of-the-world newspapers (households), EUR mil.		2
VAT %		02
Subscription to rest-of-the-world newspapers (households), EUR mil.		
Newspapers purchased as single copies:		
VAT %		22
Finnish newspapers purchased as single copies, EUR mil. (includes value-added tax):		119
- of which purchased by households, %		89
Newspapers purchased as single copies by households, EUR mil.		106
<b>Household expenditure on newspapers, total, EUR mil.</b>		<b>463</b>
<b>PERIODICALS</b>		
Periodical turnover, EUR mil.		<b>680</b>
Distribution of profits:		
Subscription payments, %		64
Single copy sales, %		8
Advertising revenue, %		28
Subscriptions and single copy sales, profits, EUR mil.		
Subscriptions, EUR mil.		432
Single copy sales, EUR mil.		54
Finnish periodical subscriptions:		
Household share of subscriptions, %		72
Household share of subscriptions, EUR mil.		311
Value-added tax, %		0
Finnish periodical subscriptions (households), EUR mil.		311
Subscription to rest-of-the-world newspapers (households):		
Finnish household subscriptions to rest-of-the-world periodicals, EUR mil.		3
Value-added tax, %		0
Subscriptions to rest-of-the-world periodicals (households), EUR million		3
Single copy sales of periodicals:		
Value-added tax, %		22
Finnish periodicals purchased as single copies, EUR mil.(incl. VAT):		127
- of which purchased by households, %		85
Periodicals purchased as single copies by households, EUR million		108

Household periodical expenditure, total, EUR million	421
Household newspapers and periodicals, total, EUR mil.	884

### C10 EDUCATION

	Year 2004																			
	Value		Basic accounting method		Additional sources used															
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C10 EDUCATION	350	x																		
C100 Education	350	x																		
C1000 Education	350	x																		
C10000S Education	350			x (B/share of output)																

### x (B/Share of output) Example: Final consumption expenditure group "C10000S Education" gathered from industry data

<b>a) Enterprises, TOL 80 Education</b>	
Output at basic prices, EUR 435 mil.	
Distribution of output by products:	
Driving tuition, EUR 86 mil.	Other education EUR 349 mil.
- of which	
Household final consumption expendit. at basic prices, EUR 86 mil.	Household final consumption expendit. at basic prices, EUR 105 mil.
Transfer at purchasers' prices:	
Value-added tax and other taxes on products, net EUR 19 mil.	Value-added tax and other taxes on products, net EUR 18 mil.
Household final consumption expenditure at purchasers' prices EUR 105 mil.	<b>C10a) Household final consumption expenditure at purchasers' prices EUR 123 mil.</b>
<b>b) Non-profit institutions serving households, TOL 80 Education</b>	
Output at basic prices, EUR 982 mil.	
of which:	
Market output, EUR 88 mil.	
Sales of non-market products, EUR 155 mil.	
Distribution of output by products:	
Education, EUR 982 mil.	
of which	
Household final consumption expenditure at basic prices, EUR 155 mil.	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products, EUR 0 mil.	
<b>C10b) Household final consumption expenditure at purchasers' prices, EUR 155 mil.</b>	
<b>c) General government, TOL 80 Education</b>	
Output at basic prices, EUR 2 026 mil.	
of which	
Market output, EUR 255 mil.	
Sales of non-market products, EUR 0 mil.	
Distribution of output by products:	
Education	
of which:	

Household final consumption expenditure at basic prices, EUR 14 mil.	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products net, EUR 3 mil.	
<b>C10c) Household final consumption expenditure at purchasers' prices, EUR 17 mil.</b>	
<b>d) Local government, TOL 80 Education</b>	
Output at basic prices, EUR 5 634 mil.	
of which:	
Market output, EUR 239 mil.	
Sales of non-market products, EUR 72 mil.	
Distribution of output by products	
Education	
of which:	
Household final consumption expenditure at basic prices, EUR 49 mil.	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products net, EUR 0 mil.	
<b>C10d) Household final consumption expenditure at purchasers' prices, EUR 49 mil.</b>	
<b>e) Local government, TOL 751 Public Administration</b>	
Output at basic prices, EUR 5 046 mil.	
of which	
Market output, EUR 1 746 mil.	
Sales of non-market products, EUR 236 mil.	
Distribution of output by products:	
Education	
of which:	
Household final consumption expenditure at basic prices, EUR 6 mil.	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products net, EUR 0 mil.	
<b>C10 e) Household final consumption expenditure at purchasers' prices EUR 6 mil.</b>	
<b>C10000S Education</b>	
<b>Household final consumption expenditure of output</b>	
C10a) Enterprises, TOL 80 Education	108
C10b) Non-profit institutions serving households, TOL 80 Education	126
C10c) Central government, TOL 80 Education	15
C10d) Local government, TOL 80 Education	45
C10e) ) Local government, TOL 751 General government	4
<b>TOTAL</b>	<b>EUR 350 mil.</b>

### C11 HOTELS AND RESTAURANTS

	Year 2004																			
	Value		Basic accounting method		Additional sources used															
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C11 HOTELS AND RESTAURANTS	4 803	x																		

C111 Hotel and catering services	4 476	x																	
C1111 Restaurants, cafeterias	3 672	x																	
C11110S Restaurants, cafeterias	3 672				x (B/C11)														x
C1112 Canteens	804	x																	
C11120S Canteens	804				x (B/C11)														x
C112 Accommodation services	327	x																	
C1120 Accommodation services	327	x																	
C11200S Accommodation services	327				x (B/C11)														x x

<b>x (B/C11)</b>			
<b>Industry</b>			<b>2004</b>
<b>H</b>	<b>Hotels and restaurants</b>		
	Output, EUR mil., excl. value-added tax, from National Accounts Production account	4959	Sources: National Accounts Production accounts, Hotel and Restaurant Assoc., s Assoc.) Statistics Finland tourism statistics, etc.
<b>551</b>	<b>Accommodation services Hotels</b>		
	Output EUR mil., excl. value-added tax, from National Accounts Production account	1 297	
	- of which accommodation sales, %	41	
	- of which restaurant sales, %	59	
	- of which accommodation sales (Heading C11200S), EUR million excl. value-added tax	532	
	- of which restaurant sales (Heading C11110S), EUR million excl. value-added tax	765	
	Household share of accommodation sales, %	57	
	Household share of restaurant sales, %	77	
	Heading C11200S Accommodation services, EUR million excl. value-added tax	303	
	Heading C11110S Restaurants and cafeteria services, EUR mil. excl. value-added tax	589	
<b>553</b>	<b>Restaurants</b>		
	Output excl. value-added tax, to be found in National Accounts Production account	3 662	
	Household share of sales, %	75	
	Household share of sales, EUR mil. excl. value-added tax	2 754	
	- of which heading C11120S Canteens, %	18	
	- of which heading C11110S Restaurants and cafeteria services, %	82	
	Heading C11110S Canteen services, EUR mil. excl. value-added tax	504	
	Heading C11110S Restaurants and cafeteria services, EUR mil. excl. value-added tax	2 250	
<b>Other</b>	<b>Restaurant services from other industries (separate calculations)</b>		
	Local government		
	Payments for meals	119	
	Central government		
	Payments for meals	16	
	Non-profit institutions		
	Payments for meals	11	
	Other industries (manufacturing, banks, etc.)		
	Estimate: extent of own-account food services as a percentage of equivalent services produced by the restaurant industry	1.8	
	Payments for meals	9	
	Restaurant services by sea and inland waterways		
	- of which household final consumption expenditure, EUR mil.	208	
	<b>TRANSFER AT PURCHASERS' PRICES (taxable items increased by appropriate VAT %).</b>		
	Price of untaxed accommodation service increased by increment in accordance with VAT	1.08	
	C11200S Accommodation services, EUR mil.	<b>327</b>	
	Price of untaxed restaurant service increased by increment in accordance with VAT	1.22	
	C11110S Restaurants, cafés and the like, EUR mil.	<b>3 672</b>	
	Price of untaxed staff canteen service increased by increment in accordance with VAT	1.22	
	C11120S Canteens, EUR mil.	<b>804</b>	
	C111 Catering services, EUR mil.	<b>4 476</b>	

	<b>TOTAL:</b>	
	C11 RESTAURANTS AND HOTELS, EUR mil.	4 803
	C111 Catering services, EUR mil.	4 476
	C1111 Restaurants, cafés and the like, EUR mil.	3 672
	C11110S Restaurants, cafés and the like, EUR mil.	3 672
	C1112 Canteens, EUR mil.	804
	C11120S Canteens, EUR mil.	804
	C112 Accommodation services, EUR mil.	327
	C1120 Accommodation services, EUR mil.	327
	C11200S Accommodation services, EUR mil.	327

## C12 MISCELLANEOUS GOODS AND SERVICES

	Year 2004																			
	Value		Basic accounting method		Additional sources used															
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C12 MISCELLANEOUS GOODS AND SERVICES	6 486	x																		
C121 Personal beauty treatment services	1 472	x																		
C1211 Hairdressing, etc. and personal cleanliness services	602	x																		
C12110S Hairdressing, etc. and personal cleanliness services	602			x (B/share of output)																
C1212 Electric hair dryers, electric shavers, and other electrical appliances	41	x																		
C12120D Electric hair dryers, electric shavers, and other electrical appliances	41		x										x							
C1213 Other personal cleanliness services	829	x																		
C12131ND Cosmetic and toilet services	498		x																	
C12132ND Toilet paper, handkerchiefs and the like	119		x																	
C12133ND Baby's nappies, sanitary towels, cotton wool	133		x																	
C12134SD Combs, hairbrushes, shaving equipment, toothbrushes	79		x																	
C122 Prostitution	51	x																		
C1220 Prostitution	51	x																		
C12200S Prostitution	51			x (B/share of output)																
C123 Personal goods n.e.c.	373	x																		
C1231 Jewellery and clocks	211	x																		
C12311D Jewellery	144		x																	
C12312D Wrist watches, pocket watches, wall clocks and the like	50		x																	
C12313S Repair of jewellery, clocks and watches	17		x																	
C1232 Other personal goods	162	x																		
C12321SD Bags, purses, wallets	72		x																	
C12322SD Perambulators, strollers, safety seats	31		x																	
C12323SD Umbrellas, sunglasses, smoker's paraphernalia	59		x																	
C124 Social security	1 108	x																		
C1240 Day care, institutional and other social service charges	1 108	x																		
C12400S Day care, institutional and other social service charges	1 108			x (B/share of output)																
C125 Insurance	1 180	x																		
C1250 Insurance	1 180	x																		
C12500S Insurance	1 180			x (B/Insurance)																
C126 Financial services	1 789	x																		

C1261 Actual financial services	1 088x																			
C12610S Actual financial services	1 088			x (B/share of output)																
C1262 Indirect financial services	701x																			
C12620S Indirect financial services	701			Centralised national accounts calculation																
C127 Other services n.e.c.	513x																			
C1270 Other services n.e.c	513x																			
C12700S Other services n.e.c	513			x (B/share of output)																

### x (B/Insurance)

The share of non-life insurance service charge is based on the calculations for output and premium data obtained from the Federation of Finnish Financial Services (output / premiums). This share, the service charge percentage (2006: 47 %) is applied for basic data of premiums available for different sectors in order to attain estimates for intermediate consumption and household final consumption. The final use by use categories is balanced in supply and use tables. Rest of the premiums is recorded in secondary distribution of income accounts.

The output of life insurance at current prices is counted as household final consumption expenditure as such.

The HFCE estimates for insurance are produced connected with the compilation process of the production accounts of insurance to ensure the balance between the supply and the use.

<b>x (B/Share of output)</b>		
<b>Example: Industry "9309 Other personal services" distribution of output among use items</b>		
Output at basic prices EUR 602 mil.		
Distribution of output by products:		
Hairdressing, etc. personal cleanliness services EUR 510 mil.	Burial and other services EUR 80 mil.	Other sports and recreation services EUR 12 mil.
- of which: 97% household final consumption expenditure	of which: 100% household final consumption expenditure	of which: 100% household final consumption expenditure
Derives:		
Household final consumption expenditure at basic prices, EUR 493 mil.	Household. final consumption expenditure at basic prices, EUR 80 mil.	Household. final consumption expenditure at basic prices, EUR 12 mil.
VAT and other taxes on products net, EUR 109 mil.	VAT and other taxes on products net, EUR 0 mil.	VAT and other taxes on products net, EUR 3 mil.
Household final consumption expenditure at purchasers' prices, EUR 602 mil.	Household final consumption expenditure at purchasers' prices, EUR 80 mil.	Household final consumption expenditure at purchasers' prices, EUR 15 mil.
Industry "9309 Other personal services" products allocated to household final consumption expenditure:		
C12110S Hairdressing, etc. personal cleanliness services EUR 602 mil.		
C12700S Others services n.e.c. EUR 80 mil.		
C0912S Other sports and recreation services		

EUR 15 mil.

**P311Y-P3Y SUMMARY ITEMS AND BALANCING ITEMS**

	Year 2004																		
	Value		Basic accounting method		Additional sources used														
	€ mil.	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
P311Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND	74 947	x																	
D DURABLE GOODS	7 827	x																	
SD SEMI-DURABLE GOODS	6 721	x																	
ND NON-DURABLE GOODS	21 181	x																	
S SERVICES	39 218	x																	
TUR TOURISM EXPENDITURE	-192	x																	
P312Y Consumption expenditure of resident households in the rest of world	1 477			x (B/TUR)															
P313Y Consumption expenditure of non-resident households in Finland	1 669			x (B/TUR)															
P31Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS	74 755	x																	
P32Y Consumption expenditure of non-profit institutions	3 367			x (B/P32Y)															
YSU PRIVATE CONSUMPTION EXPENDITURE IN FINLAND	78 314	x																	
P3Y PRIVATE CONSUMPTION EXPENDITURE	78 122	x																	

**P311Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND**

= Total of final consumption expenditure by product (C01+C02+...+C12)

**D DURABLE GOODS**

= Total of durable consumer goods (total of products whose heading codes are in the form C12345D).

**SD SEMI-DURABLE GOODS**

= Total of semi-durable consumer goods (total of products whose heading codes are in the form C12345SD).

**ND NON-DURABLE GOODS**

= Total of non-durable goods (total of products whose heading codes are in the form C12345ND).

**S SERVICES**

= Total of services (total of products whose heading codes are in the form C12345S).

<b>x (B/TUR)</b>		
	<b>2004</b>	
<b>Final consumption expenditure by Finns in the rest of the world, EUR mil.</b>	2 273	Bank of Finland: Balance of Payments
<b>- of which business and conference trips, EUR mil.</b>	678	Bank of Finland: Balance of Payments
<b>Difference: final consumption expenditure by Finnish households in the rest of the world, mil.</b>	1 596	

Hotel expenses included in package tours to the rest of the world, EUR mil.	118	Estimate. The item is included in household final consumption expenditure heading C09600S Package tours
Difference: household final consumption expenditure minus hotel expenses incl. in package tours in the rest of the world, EUR mil.	1 477	
TUR TOURISM EXPENDITURE	-192	
P312Y Consumption expenditure of resident households in the rest of the world	1 477	
P313Y Consumption expenditure of non-resident households in Finland	1 669	Bank of Finland: Balance of Payments

### **P31Y CONSUMPTION EXPENDITURE OF FINNISH HOUSEHOLDS**

=P311Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND + TUR TOURISM EXPENSES

### **P32Y Consumption expenditure of non-profit institutions**

= Consumption expenditure of non-profit institutions according to the sector accounts of national accounts

### **YSU PRIVATE CONSUMPTION EXPENDITURE IN FINLAND**

=P311Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND

+ P32Y Consumption expenditure of non-profit institutions

### **P3Y PRIVATE CONSUMPTION EXPENDITURE**

=P31Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS

+ P32Y Consumption expenditure of non-profit institutions

## ***5.8 Final consumption expenditure of non-profit institutions serving households***

The final consumption expenditure of non-profit institutions is obtained by deducting market output, output for own final use and sales of non-market products from the output of non-profit activities. The residual remaining is other non-market output, which is equivalent to the final consumption expenditure of non-profit activities. The latter consists of solely individual consumption.

Output for own final use in the non-profit activities includes the output of household service activities (Industry 95) in its entirety and computer software for activities in which computer programs are produced for own final use. Such programs are calculated centrally in the national accounts (cf. Section 5.11.2.).

Estimating the sales of market output and non-market products is based on the same method as that of intermediate consumption (cf. Section 3.20.4). The data sources used are the same. In some of the industries, recourse was necessary to additional methods as described below.

### *Road development*

Sales of non-market products correspond to both state and local authority subsidies.

### *Education*

The National Board of Education collects education costs and performance data for the upkeep of the government's share in the system, cost monitoring and the evaluation of training. Statistics Finland obtains cost data on private teaching institutions from the register collected by the National Board of Education and maintained at the University of Tampere's Computer Centre (the so-called cost of education register).

The cost of education register item "Other profits" is counted as the market output of the education industry. The cost of education register item "Payments", which is course fees, is counted as a non-market product. This is raised to the level of the whole industry so that the wages and salaries total in the cost of education register are related to the wages and salaries total of the education industry and the market output and sales of non-market products are calculated for this share. In other words, it is presumed that the ratio of sales output to wages and salaries in non-profit education is the same as in other education. Finally, purchases from elsewhere by municipalities and joint municipal authorities are added to non-market products.

### *Religious organisations*

The sales profits of religious organisations are based on the financial statistics of Evangelical Lutheran parishes. General administration, parish work, joint parish tasks and income from burial activity are counted as sales of non-market products. Income from real estate is counted as market output.

### *Activities of other membership organisations*

The Activities of other membership organisations industry (9139) is very heterogeneous. It has everything from the smallest organisation to foundations and trusts, and student organisations. On the other hand, it has no dominant organisation or group. This makes estimates of the value of sales very difficult.

The market output of the industry is estimated in such a way that the real estate<sup>6</sup> rented out by foundations and trusts is estimated to yield returns of five per cent which represents the market output of foundations. A list of the industry's organisations is then drawn up from the Business Register with all foundations and trusts removed from it. After this, market output is calculated for this sample by the same method as was used for intermediate consumption. The market output is then raised to the level of the whole industry without foundations and trusts and this figure is added to the market output of foundations and trusts. The sale of non-market products is calculated in the same way as it was for other non-profit activity industries.

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<sup>6</sup> Based on a calculation published in the Helsingin Sanomat on 22 Nov. 1999, Page B10.

## 5.9 Government final consumption expenditure

General government final consumption expenditure comprises "Other non-market output" and social transfers in kind. "Other non-market output" is obtained when market output, output for own final use and other non-market output are deducted from output.

General government final consumption expenditure is divided into individual and collective final consumption expenditure.

### 5.9.1 Central government

Central government final consumption expenditure consists of the sector's other non-market output and social benefits in kind (D631K). The sector's other non-market output stays as a remainder in the production and generation-of-income account when market output, output for own final use and other non-market output are deducted from output at basic prices. The social benefits in kind paid by central government consist of training and health care services given to those who are not government employees.

Returns made on business transactions, rental income or various kinds of operating compensation are generally counted as market output. Sales of non-market products consist mainly of fees under public law. Data sources for the items are consolidated accounting data and the Financial Statement and Report of Central Government.

Output for own final use is firstly computer software produced solely for own final use and secondly costs related to maintenance of conscripts (Industry 751), which are also shown as wages and salaries in kind in industry 752 (cf. Section 5.11.2.).

Final consumption expenditure is divided into individual and collective. Individual expenditure is calculated as the total other non-market output in the Education, Health and social work and Recreational, cultural and sporting activities accounts. Social benefits in kind are also counted into individual consumption expenditure. Collective expenditure includes the other non-market output of government industries (railway and road development, other supporting transport activities, letting and operation of real estate, research and development, technical activities, testing and analysis, miscellaneous business activities, public administration and defence equipment and conscripts).

### 5.9.2 Local government

The sales income on the goods and services produced that covers production costs is counted as **Market output** (P11). Thus, counted into this are income items in the financial statistics of municipalities and joint municipal authorities (Part II, Table 01) under such income headings as "Sales income from central government, municipalities and joint municipal authorities, others", "External rental income", "Other income" and "Internal sales income".

Sales income from municipalities recorded in joint municipal authority financial statistics includes general transfers to local government for the production of health and social services. These general government transfers are deducted from sales income since they are included in sector accounts

under economic activity "General government transfers to municipalities and joint municipal authorities." (Cf. intermediate consumption, Section 3.18.3).

**Output for own final use (P12)** includes own-account produced computer software, building construction and development by municipal institutions. Figures for computer software are to be found in the task in centralised accounting. Figures for building construction and development are likewise to be found in centralised accounting for these industries.

**Sales of non-market products (P131)** includes such sales income from goods and services as have not covered production costs. These would be, among others, fees collected by local government for public services (for example, health centre charges). Under this come income entries in financial statistics (Part II, Table 01) such as "Payments" and "Own-account production".

**Other non-market output (P13)** is obtained by deducting from output market output, output for own final use and sales of non-market products. This reflects the difference between costs accruing from production of goods and services by local government and the sales income accruing from them. Municipal sector consumption expenditure is obtained by adding together 'Other non-market output' and social benefits in kind (D631K), which are customer services that are individually purchased for residents by municipalities and joint municipal authorities.

Final consumption expenditure is divided into that of an individual or collective nature. Other non-market output and social benefits in kind of individual final consumption expenditure in the industries Education (80), Human health activities (851), Veterinary activities (852), Social work activities (853), and Recreational, cultural and sporting activities (92) comprise local government individual final consumption expenditure. Collective final consumption expenditure includes the other non-market output of industries, such as Civil engineering (5502), Road development (6302), Public administration (751) and Environmental management (90).

### 5.9.3 Social security funds

Output is divided into market output, sales of non-market products, output for own final use and other non-market output.

Market output consists of the sales proceeds of the KELA/Social Insurance Institution's rehabilitation centre and various real estate and other profits. The sale of non-market products includes proceeds of KELA cards, compensation paid to KELA by the Finnish Centre for Pensions for receiving applications for retirement pensions, payments from municipalities for the right to present questions about social security benefits, electronic data processing and other services sold, and proceeds from the sale of publications. Output for own final use consists of software (See item 5.11.2).

Other non-market output is treated as individual final consumption expenditure. In addition, social transfers in kind paid by social security funds count as (individual) final consumption expenditure.

Social transfers in kind consist of individual goods and services, which are transferred to households from social security funds in the form of benefits in kind. They are purchased in the market or produced by the funds

themselves as non-market products. Social transfers in kind form a separate group from social security benefits and social assistance benefits. Below is a table of social transfers in kind, or social security benefits and social assistance benefits which households receive from the funds.

**Table 50: D63K Social transfers in kind.**

<b>EUR million</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>2004*</b>
<b>D63K SOCIAL TRANSFERS IN KIND</b>					
<b><u>Social security benefits in kind:</u></b>					
Medicaments	678	768	859	918	1 015
Medical services	60	64	65	66	65
Dental services	41	56	65	93	95
Diagnosis and care	58	56	55	56	56
Transport and ambulance transport	108	114	122	131	141
<b>Health care compensation, total</b>	<b>945</b>	<b>1 058</b>	<b>1 166</b>	<b>1 264</b>	<b>1 372</b>
<b>Individual rehabilitation</b>	<b>182</b>	<b>191</b>	<b>212</b>	<b>227</b>	<b>226</b>
(Rehabilitation cash; not treated as a benefit in kind)	38	42	49	55	59
(Individual rehabilitation benefits, total)	220	233	261	282	285
<b>Social security benefits in kind, total</b>	<b>1 127</b>	<b>1 249</b>	<b>1 378</b>	<b>1 491</b>	<b>1 598</b>
<b><u>Social assistance benefits in kind:</u></b>					
Maternity allowance packages	7	7	7	7	7
Subsidy for travel to/from school (dating from 1 July 1997)	23	24	25	26	25
Travel costs for war veterans undergoing rehabilitation	0.6	0.8	0.8	0.9	0.8
Compensation for occupational conditions reports from self-employed persons in agriculture	0.9	1.4	1.2	1.4	1.7
Compensation for bed and board	15.8	14.0	19.1	11.5	15.0
<b>Social assistance benefits in kind, total</b>	<b>47.3</b>	<b>47.2</b>	<b>53.1</b>	<b>46.8</b>	<b>49.5</b>
<b>Social transfers in kind, total</b>	<b>1 174</b>	<b>1 296</b>	<b>1 431</b>	<b>1 538</b>	<b>1 648</b>

## 5.10 Acquisitions less disposals of tangible fixed assets

"Acquisitions less disposals of tangible fixed assets" in accordance with ESA 95 (P511) in the national accounts consists of five subgroups: residential buildings, other buildings, civil engineering works, transport equipment, machinery and equipment and cultivated assets.

### 5.10.1 Residential buildings

Investments in residential buildings comprise new construction, refurbishment and commissions and fees. Investments are estimated at purchasers' prices and they include value-added tax, insofar as it is not deductible.

The value before tax of new residential construction is to be found in Statistics Finland's statistics of building construction which contain the values for new construction by class of owner and building. The value before tax is equal to the sum of the value at basic prices and the cost to the

developer. The share of value before tax as a percentage of cost to the developer is 12% (cf. Section 3.17.1.). The value of refurbishment at basic prices is to be found in output calculations in the construction of buildings industry (4501) in the national accounts. The value of refurbishment is divided by type of owner in accordance with the structure of the refurbishment. The cost to the developer is added to the value at basic prices. The cost to the developer as a percentage of the value before tax is presumed to be 6% or half as much as for new construction.

Value-added tax by class of owner is added to the value before tax of new construction and refurbishment, as follows:

Owner classes 1 (Private agricultural self-employed person), 4 (Real estate company), 5 - 6 (Enterprise), 7 (Unincorporated municipal enterprise) and 8 (Unincorporated state enterprise): areas subject to value-added tax, or taxes, are tax deductible, so value-added tax is not added.

Owner classes 2 (Other private person or estate), 3 (Housing corporation or housing co-operative), 9-14 (Bank or insurance corporation, municipality or joint municipal authority, the State, social security fund, religious organisation, trust, association or other) and the defence forces. In other words, sectors termed not subject to value-added tax: to these sectors it is added.

Commissions and fees are calculated based on the output of the real estate agencies industry (7031). The proportion of commissions and fees for dwellings is to be found in data supplied by the Association of Finnish Real Estate Agents (number of dwellings handled as a percentage of all transactions). Value-added tax is added to transaction fees. Commissions and fees are divided by class of owner according to the breakdown of the new construction.

## **5.10.2 Non-residential buildings**

The gross fixed capital formation generated by non-residential buildings is first calculated for all industries from data sources within the industries themselves. Total investments in buildings are balanced with tender data for non-residential buildings, as described below in conjunction with real estate services.

The investments in other buildings, civil engineering works, transport equipment and machinery and equipment are calculated in most market production industries on the basis of structural business statistics. Generally, calculations of capital goods such as these three items are often based on the same data sources. Therefore, calculations of investments in the two next sections (5.10.3. and 5.10.4.) will also be explained.

As will be explained below, other data sources are also used instead of structural business statistics or, in some market production industries, in addition to them. Likewise, non-market production industries also have their own sources.

### **5.10.2.1 Structural Business Statistics**

The structural business statistics form requests information about acquisitions and disposals of fixed assets by individual category during the

year. Gross fixed capital formation is calculated by industry and type of goods (acquisitions less disposals).

Acquisitions of fixed assets include purchased (new and used) and self-produced acquisitions and major improvements. Major improvements consist of any repair, installation or alteration work which adds to the value of the fixed asset and whose influence lasts for longer than one year. Acquisitions are reported at the price paid to acquire them, the value being the total cost including installation, etc. The value of any fixed assets produced by the establishment for its own use is calculated on the basis of production costs. Fixed assets acquired by an establishment from another location belonging to the same business are valued as if they were acquired from a third party. If this is not feasible, the valuation is made based on production costs (ESA 3.49; 3.113. also: the report of the task force "Prices and Volumes for Construction" par. 15 Eurostat B1/CN 407e). In practice the price development is almost the same in total construction as in own account construction. This is understandable because own account construction includes also a lot of (sub)contract work. In the structural business statistics the value of fixed assets produced by the establishment for its own use is calculated on the basis of production costs.

Disposals of fixed assets arising from business activities during the financial period are valued at the actual purchase price or other equivalent. The time of the transfer is deemed to be the instant when the fixed asset commodity is no longer under the control of the establishment.

The classification of fixed assets in the structural business statistics survey varies by industry. For example, the classification in manufacturing is as follows:

- Land and water areas
- Civil engineering buildings
- Buildings and structures
- Machinery and equipment
- Other tangible commodities
- Advance payments for buildings and structures; works in progress
- Advance payments for other tangible commodities.

In other industries, there is no separate item "Civil engineering works". Instead, this is included in "Buildings and structures".

The item "Land and water areas" is not gross fixed capital formation. The content of the item "Other tangible commodities" varies by industry. They are not generally included in investments. For any larger items it is separately examined what they are in practice and then they are placed accordingly. "Advance payments for other tangible commodities" are mainly advance payments for machinery and equipment and they are not by definition included in gross fixed capital formation.

Advance payments for buildings and the item "Buildings and structures" are counted as construction of buildings except in Industry E: Electricity, gas and water supply, where they are regarded as belonging to civil engineering works. Parts of the item "Buildings and structures" are regarded as civil engineering works in some industries. In principle, the item "Buildings and structures" includes residential buildings, but, due to lack of information, they are not yet separated out from each other. The volume is probably

small. Machinery and equipment are classed under "Machinery, equipment and transport equipment".

Fixed assets data for businesses not part of the survey are extracted from the business income tax register. Data are obtained following the path: buildings, movable fixed assets and other, separate acquisitions and disposals. Buildings come under "Construction of buildings, Industry E, Civil engineering works". Movable fixed assets consist of machinery, equipment and transport equipment.

No separate estimate is made of the gross fixed capital formation of non-industrial, manufacturing establishments with less than 20 staff outside the survey or of omitted small businesses. Such formation is hardly measurable in small enterprises. For establishments omitted, the data are presumed to be included in investments for the enterprise's main industry.

Data for the purpose of calculating the above gross fixed capital items are obtained as a rule from structural business statistics. If adjustments are to be made, they are based on reports on individual businesses and comparisons of enterprises/establishments.

The different statistical units used in structural business statistics and the national accounts pose a drawback to using structural business statistics in calculating gross fixed capital: in structural business statistics the unit is the enterprise and in the national accounts the establishment. It is not regarded as a grave drawback to calculations at aggregate levels.

### ***5.10.2.2 Financial statistics of municipalities and joint municipal authorities***

The investments of local government are calculated on the basis of the investment table (cf. Questionnaire, Part II, Table 02) of Financial statistics of municipalities and joint municipal authorities. The table contains data differentiated by type of goods about purchases and sales (with capital gains) of fixed assets. Commodities which yield revenues or remain in service over several financial periods are recorded in fixed assets.

Excluded from local government activities are commercial type activity that counts as part of the non-financial corporations sector.

Next, the calculation of municipal sector investments will be examined by type of goods from the main source:

Residential buildings are calculated from purchases of residential buildings (3320) in municipal financial statistics and the difference in sales (8320) between the two.

Non-residential buildings are calculated from purchases of buildings other than residential (3320) in municipal financial statistics and the difference in sales (8340) between the two.

Civil engineering structures and other construction are registered as the difference in financial statistics between purchases and sales of fixed structure and equipment types of goods.

Transport equipment has been available since 1997 as the difference between purchases (83350) and sales (8350) of transport equipment. Before

1997, transport equipment was included in machinery and equipment in basic data. Investments in transport before 1997 are estimated using the change for 1997 retroactively.

Other machinery and equipment in financial statistics are obtained by deducting sales (8360) from purchases (3360).

Value-added tax paid by municipalities is taken from municipal financial statistics Table 02, transaction 4965 'Reimbursement of value-added tax' which reflects the value-added tax reimbursements from central government applying to investments the municipalities obtained. This paid and reimbursed value-added tax is then added to investments.

In addition to the economic statistical data about local government, data about local government are used in the following market production industries: Electricity, gas and water supply (E, Local authority electricity gas and water supply), Transport (6021 and 61, Local government mass transit companies and docks), Education (80, Commercial type local government educational institutions), Environmental protection (90, Sewage and refuse disposal, sanitation and similar activities).

### ***5.10.2.3 Other data sources and methods***

#### ***Agriculture***

Data on the construction of buildings are to be found in relevant Statistics Finland statistics: new construction production in agriculture, forestry and fishing. The volume of refurbishment must be estimated. Data on deductions are to be found in agricultural enterprise and income statistics.

#### ***Forestry***

Forestry construction investments are investigated by means of the structural business statistics data.

#### ***Financial intermediation and insurance***

Investments are to be found in bank balance sheet data and individual surveys. A significant share of such investments in the 1990s was in real estate owned by Arsenal Oy. The real estate business activities of this company were transferred on 1 July 1999 to Kapiteeli Oy, a real estate investment company. A lot of computer investment occurred in this industry.

Computer software investments by insurance corporations were obtained from centralised accounting. Other investments were calculated from accounting records. The Federation of Finnish Insurance Companies also compiles investment calculations. Computer investments especially have been on the rise in recent years.

#### ***Real estate services***

In the industry "Letting and operation of dwellings" (7021) non-residential building investments include new construction of storage areas and sauna sections in housing corporations, co-operative housing corporations and residential real estate companies. Their value before tax can be found in

Statistics Finland's statistics of building construction. The value-added tax is added in the way it is for investments in dwellings.

In the industry "Letting and operation of real estate" (7022) the investment item "Non-residential buildings" is first calculated from structural business statistics as the difference between acquisitions and disposals of buildings and structures. Then, the supply and demand in all industries of investment in non-residential buildings is balanced for this industry in such a way that the combined total of investments in non-residential buildings in all industries tallies with their supply.

The investment supply of construction of building consists of investments in "Non-residential buildings" (all buildings except residential buildings and holiday homes) for the overall economy. Non-residential building investments consist of new construction, refurbishment and commissions and fees. They are calculated in the same way as residential building investments (cf. Section 5.10.1.).

### *Central government*

Sources for gross fixed capital formation are consolidated accounting data and the Financial Statement and Report of Central Government in accordance with central government on-budget accounting.

Division into industries is done using the main titles, classes and items of budget accounting. In the absence of the budgetary item, the industry and function are deduced from the codes used by ministries. Business accounting balance sheet accounts are used to calculate material investments.

Value-added tax on investments is then added to capital goods.

Procurements of defence equipment are intermediate consumption and are not investments. The defence forces record only purchases of materiel for national defence in a separate defence materiel account. Other procurements, which may also be used for civilian purposes (such as buildings, personnel carriers, road construction, etc.) are recorded in balance sheet accounts, just as in other government agencies. The national defence materiel account is classified as intermediate consumption in the national accounts while the property procurements entered in balance sheet accounts are recorded as investments. This permits separation between the defence forces' intermediate consumption and investments, and items that are also intended for civilian use are not recorded as intermediate consumption.

### *Social security funds*

Data about investments are to be found in financial statements and attached notes. The Federation of Finnish Insurance Companies also publishes follow-up reports on investment activities containing data on investments by employee pension funds.

### *Non-profit institutions serving households*

Investments in construction of buildings are based on construction of buildings statistics for several non-profit institutions. Buildings in the statistics are classified by type of building and owner. As a result, they can be focused on the right industry.

Investments of religious organisations are based on the financial statistics of Evangelical Lutheran parishes. The method used is the same as when calculating intermediate consumption, i.e. investments are increased to the level of the entire industry on the basis of Business Register wages and salaries variables.

To estimate investments in Education and Health and social work, recourse was had to cash grants made by the Finnish Slot Machine Association. Information is obtained from the Association on the investments and general assistance according to projects provided to various associations and organisations. In this way, investment assistance can be distinguished as applying to machinery, equipment or real estate. The Association is still a key financier in the above fields and based on its records, conclusions can be drawn about aggregate investments.

### 5.10.3 *Civil engineering*

Calculations for civil engineering are explained above in Section 5.10.2. In this section, they are explained insofar as other data sources and methods are used.

#### *Forestry*

Civil engineering activities in logging are investigated using the Finnish Forest Research Institute's statistical bulletins "Forest management and major improvements". It includes covered drainage, forest road construction and major improvements, but not road maintenance and covered drainage upkeep.

#### *Transport*

As mentioned above, part of the structural business statistics item "Buildings and structures" involves civil engineering construction and not the construction of buildings. Civil engineering investments in the transport industry are separated out as follows:

Tram and underground rail transport and transport by pipeline are separated out in land transport civil engineering construction. Track and road network construction is counted as investment in public civil engineering works.

Civil engineering construction investment in water transport consists of building and repairing public log floating waterways. The construction of other waterways is counted as investment in public transport.

Construction of new log floating waterways is in the charge of the National Board of Forestry and repair work is done by local log floating associations in conjunction with the Board. Data needed for calculating new production are collected from the Board by separate surveys. The share of repair work on waterways done by local log floating associations is to be found in their annual reports.

Investments in civil engineering works for other auxiliary and supporting transport activities include construction of national emergency supply storage facilities, docks and airports. Investments in safe storage facilities consist mainly of State-built protective stores for which construction costs are to be found in consolidated accounting data and the Financial Statement

and Report of Central Government. For docks, calculation is based on data in local authority financial statistics and for airports on financial statement data from the Civil Aviation Administration.

Investments in civil engineering works for communications consist of acquisitions of fixed and movable equipment for the telecommunications network, the former counting as civil engineering works and the latter as investment in machinery and equipment. The civil engineering share in constructing the telecommunications network is calculated based on network operator costs to activate plant assets.

#### *Non-profit institutions serving households*

Civil engineering investments only occur in the road development industry (private roads). Data are based on local authority and discretionary government grants for private roads.

#### *5.10.4 Transport equipment, machinery and equipment*

Calculations of transport equipment, machinery and equipment are explained above in Section 5.10.2. In this section, calculations are explained insofar as other data sources and methods are used.

Structural business statistics and other key data sources do not contain financial leasing investments. They are added to investments in transport equipment, machinery and equipment for various industries. In some cases, financial leasing may have applied to the construction of a building or civil engineering project. Such instances are explained separately. Financial leasing investments are allocated to the industries which avail of them. The calculation is performed centrally using as a source the publication "Financial Leasing", produced annually by Statistics Finland. It shows financial leasing investments and rentals paid by industry. Financial leasing rental payments are deducted from intermediate consumption.

#### *Agriculture*

Data applying to gross fixed capital formation in machinery and equipment are based on agricultural enterprise and income statistics and financial statement statistics of enterprises. Agricultural enterprise and income statistics contain data regarding expenditure on acquisitions and major improvements as well as disposals and transfers to another source of income. The monitoring sources used include the Agricultural Technology Research Institute's (VAKOLA) agricultural machinery sales statistics and imports of used agricultural machinery available from customs statistics.

Data regarding investments in personal computers are based on special reports from the Rural Advisory Organisation.

#### *Forestry*

Examined by means of the structural business statistics. Additionally, data are to be found in sales data collected by VAKOLA. The group includes forwarders, forestry trailers and agricultural tractor attachments.

Sales of other machinery and equipment are to be found in VAKOLA data. The investment category includes chopping machines, power saws and other machinery and equipment.

## *Transport*

Calculations about transport equipment investments are described here.

Transport equipment investments in the land, water and air transport industries are investigated by type of vehicle, based on annual reports, or special reports applying to alterations in fixed assets, including the acquisition of ships and aircraft through financial leasing, which is treated as intermediate consumption of rental adjustment items. Transport equipment investments in transport and related activities and telecommunications are determined based on the number and average price of new vehicles registered in industries. Figures by type of vehicle and industry are to be found in motor vehicle statistics. The values are determined based on average prices of private motor cars and price data in cost indices for truck, taxi and bus transport, collected to calculate depreciation of vehicular assets.

Transport equipment on land, calculated separately, consist of locomotives and rolling stock, motor cars and machinery, buses, trams and underground rail carriages, and taxis, trucks and vans registered for professionally driven transport. Transport equipment on railways is calculated based on reported net fixed asset acquisitions by the VR Group. Buses for private bus transport are estimated based on financial statement statistics for bus transport. Acquisition and disposal expenses for buses are available separately from other plant assets data. Data on the transport fleets of local authority mass transit companies are investigated using annual reports and separate reports applying to alterations in capital assets. The net increase in movable assets in structural business statistics for taxi transport is calculated as investment in taxis alone.

Truck transport investments in vehicles are calculated based on data from the Finnish Trucking Association (SKAL) and not from movable assets acquisitions and disposals according to structural business statistics. For vans, the value at current prices is obtained by multiplying the number of new vehicles registered for professional driving purposes by their average price. The number of registrations is got from motor vehicle statistics. Truck transport cost index price data collected to calculate capital depreciation in vans are used as average prices. The volume of investments for water transport vessels is calculated based on the value of vessel acquisitions and disposals in the Finnish Maritime Administration's register of vessels. Acquisitions are new vessels built in Finland or elsewhere or bought second-hand from abroad. Disposals are those sold or transferred abroad using other ownership arrangements. Vessel acquisitions are priced at purchase price and disposals at surrender price. In the case of financial leasing or where the vessel's price is not given, an estimate is made based on the insured value or imputed price.

Investments in air transport equipment consist of acquisitions of aircraft and ground equipment. The aircraft investment calculation item includes, besides acquisitions by air transport companies, an imputed share of acquisitions of other powered aircraft and helicopters for professionally paid flights. The value of these professionally flown aircraft is determined by imports and

exports of aircraft and growth in the stock of aircraft reflected in calculations. Counted in ground transport equipment is the value of Finnair's airport and transport service vehicles.

### *Real estate activities*

No machinery, equipment or transport equipment investments are recorded for "Letting and operation of dwellings" (Industry 7021). Instead, the acquisitions less disposals of movable property in this industry to be found in structural business statistics are recorded as machine, equipment or transport equipment investments in "Management of real estate on a fee or contract basis" (Industry 7032).

### *Non-profit institutions serving households*

Investments in machinery, equipment or transport equipment in non-profit institutions serving households are especially difficult to estimate. They are based on notes added to financial statements and balance sheets. The former sometimes contain yearly machinery, equipment or transport equipment investments. For the latter, the estimate is based on the fact that annual depreciation of machinery and equipment is roughly 30%. Machine and equipment investments are calculated in such a way that the difference between the value recorded at the start and end of the year is first calculated and a 30% presumed depreciation is added. The total is then increased to the level of the rest of the industry as it was for intermediate consumption.

### **5.10.5 Cultivated assets**

Investments in cultivated assets arise in Finland in two market production industries: Agriculture (01) and Recreational, cultural and sporting activities (92).

In agriculture, investments in animals are calculated using an indirect compiling method, described in the handbook "Manual on Economic Accounts for Agriculture and Forestry" (Revision 1.1.). All animals produced, excepting horses, are treated as capital animals.

Investments in cultivated assets in the recreational, cultural and sporting activities industry consist of trotting horses. Horse investments are calculated as the product of the annual growth in the number of horses and their average price, to which is added the difference between the market value and butchered value of horses.

Neither grape and other fruit orchards nor plants producing perennial harvests are processed in Finland on account of their scarcity.

## **5.11 Acquisitions less disposals of intangible fixed assets**

According to ESA 95 (P511), "Acquisitions less disposals of intangible fixed assets" in the national accounts consists of three subgroups: mineral exploration, computer software and original works in entertainment, art and literature.

### **5.11.1 Mineral exploration**

The following interests engage in mineral exploration:

- Mining companies on their own behalf,
- Enterprises engaged in mineral exploration on their own behalf, and
- Enterprises engaged in mineral exploration as a service to mining companies.

According to ESA 95, acquisitions of intangible fixed assets are valued in relation to costs in the case of mineral exploration. Investments in mineral exploration are valued from the supply approach. Sources used are the structural questionnaire of the Finnish Association of Consulting Firms and enterprise statistics surveys.

### *Special survey of enterprise statistics, 1990*

A special survey of the Business Register taken in 1990 detailed the production of enterprises offering technical services according to individual product. Included in the product "Mapping, soil and waterways research" are measuring and surveying techniques, geotechnical research of soil and rock formation, groundwater geology, groundwater technology and water quality and waterway research. In 1990, this product accounted for 5.9% of the turnover of enterprises offering technical services. In terms of 1995 figures, a 5.9% share of the technical services industry's output amounts to EUR 113 million for "Mapping, soil and waterways research".

In the study made by the Finnish Association of Consulting Firms (SKOL), the activities of companies are divided according to product. In 1988, "Geoconstruction technology" and "Geotechnical research" were merged as "Geotechnology". Until 1987, activities were still separated into "Measuring and mapping and geotechnical research" on the one hand and "Groundwater technique and water and waterways research" on the other. Their combined turnover at that time amounted to EUR 19 million, of which 84% was spent on the former group. In terms of 1995 figures, 84% (or EUR 95 million) of the EUR 113 million spent on "Mapping, soil and waterway research" was used on "Measuring and mapping and geotechnical research".

The problem is that "Measuring, mapping and geotechnical services" are carried out for reasons other than just mineral exploration, i.e. construction activity. Based on a 1990 business survey, the manufacturing industry used 41% of the production of the product in question which in terms of 1995 accounting amounted to EUR 39 million out of EUR 95 million. Exports, construction, general government and trade accounted for the remaining 59%. Construction, trade and general government likely used soil and rock formation survey services to invest in building construction. As far as exports go, it is unclear if soil surveys relate to construction exports or to mineral exploration carried out for foreign mining companies.

This figure (EUR 39 million), contains more than services ordered by the mining industry alone. For example in 1990, a 1.1% share of measuring, mapping and geotechnical services was ordered by the trade industry in construction of building investments. In terms of 1995 figures and the national accounts for manufacturing, the amount is EUR 8 million, which reflects the amount of measuring, mapping and geotechnical services purchased by manufacturing. Subtracting this figure from EUR 39 million, leaves EUR 31 million.

This EUR 31 million represents industry investment in "Mining of metal ores" (13). It amounted to **1.6%** of the output of technical services in 1995. This percentage is applied each year in the absence of better data. The value of mineral exploration was EUR 207 million in 2004.

### 5.11.2 Computer software

Investments on software consist of purchased and own-account software. For the business sector (S.11) purchased software is estimated from Structural Business Statistics (SBS). The estimate for purchased software consists of two variables: 1) computer, design and programming expenses and 2) increases and decreases of computer software investments. Software includes bought and customised computer software and licence fees for computer software. Software included in the acquisition price of machinery and equipment is not included. The first variable consists of a mix of expenses and it is assumed that 30% of these expenses are due software investments.

Own-account software is estimated using the wages of IT-personnel in firms from detailed register based data from the Finnish structure of earnings statistics. The International Standard Classification of Occupation (ISCO) classes 1236 (computing services managers), 213 (Computing professionals), 312 (Computer associate professionals) and 4113 (data entry operators) are used. Data on number of employees, average monthly earnings and average yearly earnings are obtained at the NACE rev.2 2-digit industry classification.

As the multiplication of the number of software personnel by their average compensation provides their total compensation, adjustments have to be made to obtain the labour costs of own-account software production. The report of 2002 OECD Task Force recommends a 50% deduction rule for the time spent by software professionals on tasks other than software development. The 50% share originates from a 29-year old study on the share of software development and maintenance costs reported by Barry Boehm (Boehm 1981). Finland has adopted the 50% deduction to all the industries except industries 32, 51 and 72 (Nace rev.1). In these industries it is assumed that most of the software development work made by the employees is for production of software to be sold and not for in-house usage (only ISCO 213 for these industries). For the industries 32 and 51 25% and for the industry 72 10% of the wages are assumed to be for own-account software's.

Other adjustments for non-labour costs are recommended by the 2002 OECD Task Force. As direct data on non-labour costs of own-account software production is hardly available, it has generally to be estimated based on the relationship between labour costs and non-labour costs of relevant industries. In the Finnish own-account software investments estimate a non-labour cost increase for all the industries is made using the ratio of operating surplus/mixed income net to wages and salaries of the industry 72 (Computer and related services).

For central government sector (S.1311), the data on purchased software is acquired directly from the state book-keeping data; own-account software figures are based on estimates described above.

The investments on software of local government (S.1313) are now based on the Statistics Finland's annual inquiry "Finances and activities of municipalities and joint municipal boards". The inquiry has contained data on software investments since 2006.

In financial institutions (S.12) the estimation is based on different, scarce information available in the S12 subsectors. The final level of this sector is determined in the balancing of supply and use of software investments of the whole economy. The data collection of credit institutions will soon be renewed and new questions about software investments will be included in the data collection template. In the reference year 2013 and onwards figures of software investments for credit institutions will be based on that Statistics Finland's direct data collection.

**Table 51: Computer software investments 2008, EUR million**

		Total	S11	S12	S13	S14+S15
Total	Total, industries	2377	1836	313	215	13
	Primary	5				5
	Secondary	805	804			1
	Services	1567	1032	313	215	7
Own-account	Total, industries	694	462	126	106	
	Primary					
	Secondary	131	131			
	Services	563	331	126	106	
Purchased	Total, industries	1683	1374	187	109	13
	Primary	5				5
	Secondary	674	673			1
	Services	1004	701	187	109	7

### 5.11.3 Original works in entertainment, art and literature

This item consists of the following accounting entities: literature, motion pictures and videos, music and television and radio productions.

The value used for original works in literature is an estimate of royalties paid to authors obtained from the Finnish Book Publishers Association. Copying fees from the annual report of the copyright organisation Kopiosto were added to this.

The calculation method can be conceived as a discounting approach of future returns at the present value. It is then assumed that the output and discount factors ( $r$  and  $j$ ) of the formula  $W_j = H_j * (1+r)^{-j}$  are on average equal (cancel each other out), although there were significant differences on the annual level. Then the value of original works comprises of annual fees, i.e.  $H_j$  is the sum of copyright fees in year  $j$ .

The output of original works in motion pictures and videos is calculated from the data of the structural business statistics and the Business Register, industry 92110 Motion picture and video production, according to the

calculation formula of market production. Thus the production approach (including the operating surplus component) is used in valuating output. The structure of the whole industry is applied to the calculation. Copyright fees and royalties are included in output with the calculation method used. The share of advertising films is removed from Motion picture and video production by means of an estimate derived from the Mass Media Statistics.

The value of original works in music is also calculated as described in the previous paragraph from the data for industry 22410 Publishing of sound recordings. The music copyright fees are derived from the data of the copyright organisations TEOSTO and GRAMEX. These organisations, which are non-profit institutions, are not included in the data for industry 22410. Copyright fees include performance compensations for domestic original works from both Finland and abroad. These are added to the supply data.

The value of original works in television and radio production is estimated by means of programme information produced by the Finnish Broadcasting Company YLE. The Company's annual reports are mainly used as a source. Original works in television and radio production include drama programmes and radio plays, scientific and educational programmes, children's programmes and documentaries. The values of productions are estimated by means of annual broadcasting hours of different channels, average prices of broadcasting hours and broadcasting shares of the productions in question. The value of original works is thus calculated through costs and it does contain the operating surplus component.

## ***5.12 Adding to the value of non-produced non-financial assets***

### ***5.12.1 Major improvements to non-produced non-financial assets (P5131)***

In Finland, "Acquisitions less disposals of intangible fixed assets" (P5131) as in ESA 95 mainly refers to land related major improvements. Investment in "Land and other such major improvements" occurs in five industries: Agriculture (013 Growing of crops combined with farming of animals), Growing of forests (0211), Other forestry and logging activities (0219), Mining and quarrying of energy producing materials (10) and Activities of religious organisations (9131).

Major improvements in agriculture include subsoil drainage. The industry organisation Finnish Field Drainage Center collects data about it by area and cost in hectares. Deductions are to be found in agricultural enterprise and income statistics.

In the logging industry, these investments consist of forest management and land improvement to be found in the statistical bulletin "Forest management and land improvement" by the Finnish Forest Research Institute (METLA) or from the forest statistics yearbook. It contains: preparation of renewal area, artificial regeneration, seeding stand care, refining young forest, thinning of thicket and forest fertilisation. Part of the investments in land and other major improvements is output for own final use in the industry Growing of forests.

In the energy mining industry, investments in land and other major improvements occur only in the subindustry Extraction and agglomeration of peat (103). Data are got from profit and loss statements of the Vapo Group (production for own use).

In the religious organisations industry, land and other such major improvements refer to the care of cemeteries. The data are based on the financial statistics of parishes in the Finnish Evangelical Lutheran Church.

### 5.12.2 *Costs of ownership transfer on non-produced non-financial assets (P5132)*

"Costs of ownership transfer on non-produced non-financial assets" (P5132) as in ESA 95 mainly refers to asset transfer taxes on the sale of land.

Since 1997, this item includes asset transfer tax and the equivalent retroactive stamp duty. At stake here are the taxes payable by new owners for the transfer of ownership, as referred to in ESA 95 Section 3.111c. The item is recorded under industry 0211 Growing of forests.

A 1990 report addresses the separation of stamp taxes between those payable for transfer of the right to ownership of land, etc. and other stamp duties. Asset transfer tax is paid not only on transfers of title to land, etc. but on the surrender of real estate, shares in housing corporations and other transfers like shares of business premises. Capital transfer taxes on securities are also deducted from asset transfer tax.

Earlier, the asset transfer tax and stamp duty attaching to transfer of ownership were also included in additions to land and other non-produced non-financial assets. In 2002, they were transferred to investments in residential and other non-residential buildings. In supply and use tables costs of the ownership transfer of non-produced assets like commissions, legal confirmation of possession of real estate, etc. have been recorded to this item (P5132).

## 5.13 *Changes in inventories*

Changes in inventories are classified in the national accounts by type of inventory. Types of inventory are: materials and supplies, work in progress, finished goods and goods for resale. The first two of these are further divided into subitems.

**Table 52: Types of inventory**

P52 Change in inventories
P521S Materials and supplies
P5211S Fuels
P5219S Other materials and supplies
P522S Works in progress
P5221S Work in progress on cultivated assets
P5222S Work in progress on buildings
P5223S Work in progress on machinery and equipment
P5229S Other work in progress
P523S Finished goods
P524S Goods for resale

Machinery, equipment and transport equipment (P5223S) is not yet separated in Finland, but is recorded as Other work in progress (P5229S). Work in progress on machinery and equipment is recorded as investments (to their full value) and as change in inventory (closing value of previous year), accordingly as they reach completion. Work in progress on buildings is not recorded as change in inventories, but as investment, accordingly as they progress. Work in progress on cultivated assets is recorded only in agriculture. Growth of forests is not recorded as change of inventories.

Finished goods and work in progress are valued at basic prices whereas materials and supplies and goods for resale are valued at purchasers' prices. Average prices for the period (the average of opening and closing prices) are used in Finland to calculate inventory bases and changes in inventories (except work in progress).

Changes in inventories are calculated in the following industries: Agriculture (01), Manufacturing (CDE), Wholesale and retail trade (G), Hotels and restaurants (H) and Public administration (751). The inventories of other industries are few in number.

### 5.13.1 Agriculture

Changes during the year in the number of domestic animals not classed as capital animals are regarded as changes in inventories. The Ministry of Agriculture and Forestry's Information Centre (TIKE) collects data on numbers of domestic animals in a sample survey each December. Changes in the cattle stock are valued at the average price for the calendar year, obtained from animal breeding associations.

The opening stock of cereal in statistical year  $t$  is the cereal from the previous year being traded by the end of July of year  $t$  and the closing stock is that harvested in calendar year  $t$  and traded by the end of July in year  $t+1$ . The change in inventories is the difference between closing and opening stock. It is presumed in calculations that a holding's inventories are empty at the close of each harvest year, i.e. the end of July. In addition, inventories are presumed to be only for the delivery of cereal outside the industry.

### 5.13.2 Forestry

The output of forestry includes the value of timber felling, activities related to silviculture and changes in inventories arising from timber growth. The proportion of felled trees to overall growth has been about 3:4 during recent years in cubic metres. In euros the proportion is however different due to the higher value of fellings per cubic metre compared with that of forest growth.

The growth of the forests is estimated by the Finnish Forest Research Institute (METLA) by timber assortment, owner group and region based on data gathered in the National Forest Inventory. The net growth of forests is calculated by deducting the annual fellings from the annual growth of forests. In order to estimate the value of the net growth, use is made of the annual arithmetic mean for stumpage prices calculated by region and timber assortment.

### 5.13.3 *Manufacturing*

The value of current assets valued at purchasers' prices at the start and end of the year is to be found in structural business statistics: fuels, other materials and supplies, work in progress, finished goods, goods for resale and other current assets. Business inventories are counted as current assets whether adjacent to the establishment or in separate storage units elsewhere.

Inventories in the national accounts (excluding work-in-progress and other current assets) are valued at average prices for the year. Opening and closing stocks of finished goods are changed into average prices proper to each industry by means of the producer price index for manufactured products. Average pricing of goods for resale in opening and closing stocks is carried out using the aggregate index of the basic price index for domestic supply. Opening and closing stocks of fuels are turned into average prices by means of the subitems "Coal, nuclear fuel and petroleum products" in the basic price index for domestic supply. The opening and closing stocks of other materials and supplies (mainly raw materials) are changed into average prices by industry by means of the basic price index for domestic supply.

Changes in inventories are calculated as the difference between opening and closing stock prices valued at average prices. The method is not applied to work in progress or to "Other current assets". Instead, changes in inventories follow the concept of price in structural business statistics (valued as a rule on the basis of implemented production costs).

### 5.13.4 *Construction*

Changes of inventories in construction are recorded as construction of buildings and civil engineering. Work-in-progress production in these industries is reflected in production figures. Consequently, only changes in "Other materials and equipment" are recorded as changes in inventories. Data regarding changes in inventories are to be found in balance sheets of the structural building statistics. Average prices for the period (the average of opening and closing prices) are used to calculate inventories in construction using the subindex 'Materials' of the Building Cost Index. Price indices for materials are used to average prices in civil engineering.

### 5.13.5 *Wholesale and retail trade and hotels and restaurant activities*

Data on changes in inventories are to be found in balance sheet data in structural business statistics. Changes in inventories are shown in balance sheet assets in the "Current assets" item. Changes in inventories must be valued at the time they are stored (for incoming goods) or when they leave the store (for outgoing goods). Stocks are price averaged at the start and close of the financial period using the basic price index for domestic supply.

The same problems attach to the use of structural business statistics data as to the compiling of gross fixed capital figures, in other words, the different statistical units of the national accounts and structural business statistics. The problem is accentuated primarily in Industry 502 "Maintenance and

repair of motor vehicles". The inventory count in relation to turnover is so high in this industry that the repair industry is regarded as including businesses which buy and sell a significant number of motor cars. The huge inventories contain vehicles, not replacement parts related to repair activities. The problem has been solved by proportioning the maintenance and repair of motor vehicles to be found in structural business statistics to the industry's turnover to be found in the change in inventories in the Business Register. So that the inventories might be reflected exhaustively in accounts, those omitted from maintenance of motor vehicles are transferred to the industry to which they belong, i.e. the motor vehicle wholesale and retail trade.

Structural business statistics offer the most exhaustive source for estimating the wholesale and retail trade's change of inventories. Avena Oy (the former national grain store) has been removed from structural business statistics in conjunction with the reform. Avena Oy's inventory figures are added to wholesale figures separately.

### **5.13.6 General government**

The calculations include National Emergency Supply Centre stores and, since 1995, Intervention Fund stores. In the former are fuel and other emergency supplies, classified as finished goods or merchandise. In the latter case, the stores are generally barley, which comes under the item merchandise. The change in inventory is calculated at average current and constant prices, so that the change also includes price changes within the year. Price indices corresponding to each item are used to get the weighting for opening and closing stocks, and changes in inventories at average prices are obtained as the difference between them. Exceptions are the Intervention Fund's unprocessed cereal stores, for which a change in average prices is obtained by multiplying the ton weight change in inventory by the average prices of unprocessed cereals in agriculture calculations, because opening and closing inventory volumes are obtained from the Intervention Fund in tons of unprocessed cereals.

### **5.14 Acquisitions less disposals of valuables**

Net acquisitions of valuable by Central government (S1311) are based on the data on central government budget and commercial accounts. Of central government accounting offices, the Finnish National Gallery makes the most significant acquisitions of valuables.

Net acquisitions of valuables by Households (S14) are estimated with the help of Statistics Finland's Wealth Survey. The present calculations were made based on the Wealth Surveys of the years 1998 (covering the years 1994 to 1998) and 2004 (the years 2000 to 2004). Wealth Survey questions cover the values of antiquities, valuable paintings, objects of art and significant collections as cumulative data. Cumulative net acquisitions were broken down to years by dividing the sum with the number of years in question, because there is no information on the annual breakdown or changes of the cumulative sums.

Net acquisitions of valuables by non-profit institutions (S15) were calculated for industries 9131 Activities of religious organizations and 9139 Other

membership organizations n.e.c., of which the latter includes art acquisitions by foundations, which are based on the data from 1997 on the value of art acquisitions by foundations and on the data in Statistics Finland's cultural statistics on the turnover of auctioned valuable art. The figure for religious organisations is based on the balance data on valuable objects in the parishes' financial statement.

## 5.15 Exports of goods

Calculations of goods imported and exported are described here.

Figures in the national accounts on goods imported and exported are compatible with those presented in the balance of payments.

### 5.15.1 Foreign trade statistics

The key data sources of foreign trade in goods are the foreign trade statistics, issued by the statistics department of the National Board of Customs. These data fall into two categories in the European Union. Statistical data on trade with non-Member States, so-called third party countries (external trade), are to be found in customs documents. Data on trade between Member States (internal trade) are collected by means of a method called the INTRASTAT system. The customs authorities collect both external and internal trade data. Importers and exporters provide the required statistical data about internal trade each month to the regional administration of the customs which receives and checks the data and puts it at the disposal of customs. The statistics department of the National Board of Customs compiles nationally representative statistics from internal and external trade statistics.

Internal trade statistics are based on regulations prescribed by the European Union. The regulations are in force in all Member Countries and have the force of law. The data provided are used only to compile statistics. The parties responsible for providing statistical data about internal trade are defined in Article 20 of Council Regulation (EEC) No 3330/91 of 7 November 1991 on statistics relating to the trading of goods between Member States. In practice, the duty to report in Finland is determined on the basis of the aggregate value of institutional acquisitions and disposals of goods which the buyer or seller reports to the tax authorities in the control document submitted each month. The data are used to determine the need for disclosure during the statistical year. The National Board of Customs defines annually the limit of non-disclosure. The value threshold for the non-disclosure of both imports and exports in 2004 is EUR 100 000. The aggregate value data of the internal trade of small enterprises exempt from disclosure are included in figures for imports and exports in the form of unspecified imports and exports. The share of unspecified goods in 2004 was 0.9% of all goods exported and 2.8% of all goods imported.

The price concept used for foreign trade statistics in Finland is the statistical value for imports and exports. The countries are specified jointly according to the concepts of country of origin and country of destination. Foreign trade statistics in Finland are very comprehensive, containing data on the imports and exports of valuables, for example.

### 5.15.2 Adjusting items

Goods imported and exported are valued in the balance of payments and national accounts in accordance with the f.o.b. price concept. In customs foreign trade statistics exports of goods are valued at f.o.b. prices and imports of goods at c.i.f. prices. The latter are adjusted to f.o.b. prices in the balance of payments and the national accounts by deducting import freight and insurance costs. This adjustment is made by the Bank of Finland's statistics department.

Other adjustments also are made to the balance of payments and national accounts in the statistics for goods imported and exported compiled by the customs. In order to improve exhaustiveness, bunker oil sold to foreign ships and aircraft in Finland is added to exports and that procured by Finnish ships and aircraft abroad is added to imports.

A valuation adjustment, or so-called currency rate adjustment, is made to goods imported and exported. Imports and exports in foreign trade statistics for each month are valued at the exchange rate on the last day of the previous month in such a way that exports are rated at the buying rate and imports at the selling rate on that day. The foreign trade valuation is altered so that conversions of foreign currencies to marks for import and export payments in any given month are made at the average rate of exchange for that month. This adjustment is also made at the Bank of Finland.

Contrary to earlier practice, goods imported and exported for processing purposes are recorded as foreign trade and the so-called processing adjustment is no longer made in their regard. On the other hand, goods imported and exported for repair purposes are not counted as foreign trade and so are not included in foreign trade statistics as concerns internal trade from 2005. Goods imported and exported for repair, which are fairly evenly balanced, amount to about 1% of total imports and exports. Relevant data is published in the foreign trade statistics in the special grounds section for external trade.

An estimate of the value of contraband alcohol and tobacco is also added to goods imported.

**Table 53: About the calculation of goods exported and imported**

Current account item	Organisation	Statistics / expression (IMF codes)
<b>Net, goods</b>		
<b>Revenue, goods</b>	Sum of subitems / expression	=110+150+160+170+180
<b>Expenditure, goods</b>		
Revenue, trade in goods, exports, FOB, incl. repairs	Sum of subitems / expression	=110BN+110CN
Revenue, trade in goods, exports, FOB, Board of Customs, excl. gold	National Board of Customs	Foreign trade statistics
Revenue, repairs	Sum of subitems / expression	=110CA+CB+CC+CD

			Coverage repairs	estimate	gifts given, goods returned, small clearance	
			Classified repairs	Sum of subitems / expression	=-1*(151+152)	
			Processing abroad	National Board of Customs	Processing in Finland and abroad	
			Processing in Finland	National Board of Customs	Processing in Finland and abroad	
			Valuation repairs	estimate	currency rate adjustment for exports	
			Scheduled repairs	none		
			Expenditure, trade in goods, imports, FOB, incl. repairs	Sum of subitems / expression	=110BN+110CN	
			Expenditure, trade in goods, imports, CIF, National Board of Customs, excl. gold	National Board of Customs	Foreign trade statistics	
			Expenditure, adjustments	Sum of subitems / expression	=110CA+CB+CC+CD	
			Coverage repairs	estimate	gifts given, goods returned, small clearance, contraband	
			Classified repairs	Sum of subitems / expression	=-1*(110TR+110TV+151+152)	
			Freight charges on imports (= fob goods transport)	National Board of Customs	Cif-fob coefficients for imports	
			Insurance on imports (of goods transport)	National Board of Customs	Cif-fob coefficients for imports	
			Processing abroad	National Board of Customs	Processing in Finland and abroad	
			Processing in Finland	National Board of Customs	Processing in Finland and abroad	
			Valuation repairs	estimate	currency rate adjustment for imports	
			Scheduled repairs	none		
			Net, goods, processing			
			Income, goods, processing	Sum of subitems / expression	=151+152	
			Expenditure, goods, processing			
			Net, goods, processing abroad			
			Revenue, goods, processing abroad	National Board of Customs	Processing in Finland and abroad	
			Expenditure, goods, processing abroad	National Board of Customs	Processing in Finland and abroad	
			Net, goods, processing in Finland			
			Revenue, goods, processing in Finland	National Board of Customs	Processing in Finland and abroad	
			Expenditure, goods, processing in Finland	National Board of Customs	Processing in Finland and abroad	
			Net, goods, repairs to investment goods			
			Revenue, goods, repairs to investment goods	National Board of Customs	Repair in Finland and abroad	in services/to be adjusted

	Expenditure, goods, repairs to investment goods	National Board of Customs	Repair in Finland and abroad	in services/to be adjusted
	Net, goods, purchases for means of transport			
	Revenue, goods, purchases for means of transport,	Sum of subitems / expression	=171+172+173	
	Expenditure, goods, purchases for means of transport			
	Net, fuel for ships			
	Revenue, fuel for ships		estimate	inquiry to oil companies??
	Expenditure, fuel for ships	Statistics Finland	Income and expenditure of foreign sea transport	
	Net, aircraft fuel			
	Revenue, aircraft fuel		estimate	inquiry to oil companies??
	Expenditure, aircraft fuel	Finnair	Fuel purchases abroad	
	Net, other port costs			
	Revenue, other port costs	missing		
	Expenditure, other port costs	missing		
	Net, goods, non-monetary gold			
	Revenue, goods, non-monetary gold	Sum of subitems / expression	=181+182	
	Expenditure, goods, non-monetary gold			
	Net, gold held as a store of value			
	Revenue, gold held as a store of value	missing		
	Expenditure, gold, gold held as a store of value	missing		
	Net, other non-monetary gold			
	Revenue, other non-monetary gold	National Board of Customs	trade in goods	
	Expenditure, goods, other non-monetary gold	National Board of Customs	trade in goods	

## 5.16 Exports of services

Calculations of exports and imports of services are described here.

Figures on exports and imports of services in the national accounts are compatible with those presented in the balance of payments, but for one exception, exports and imports of construction services. Foreign trade in construction services is included in the services of the balance of payments, but in the national accounts in property income (withdrawals from the income of quasi-corporations).

A statistical survey on foreign trade in services was initiated in Statistics Finland applying to the statistical year 1999. Until the end of 1998, the data were based mostly on a statistical system of foreign payments maintained by the Bank of Finland. It was supplemented by direct enterprise questionnaires to transport service enterprises, communications enterprises and insurance corporations for services purchased from or sold to external units. Transport and insurance services, from which data about foreign trade are obtained as before, are partly excluded from the survey. Also excluded are services, which are very probably aimed at domestic customers alone. The target group is enterprises which engage in foreign trade in services. The fundamental set comprises a combination of three data: so-called external data involving mainly Bank of Finland data on enterprises, so-called basic data on enterprises consisting of enterprises in this file in the previous year, produced by Statistics Finland's Business Structures department, and customs data on enterprises. Allowing for exclusions, the data are divided into two frameworks. A complete inquiry is conducted into the first and a random inquiry into the second. A total of around 2 000 enterprises come within the scope of the survey. Experience and data obtained from the previous years' surveys are utilised to form the sample framework and the sample.

### *Travel income and expenditure*

Methods of measuring travel income and expenditure based on tourism surveys were developed in Statistics Finland in 1999. Interviews with non-residents about cash spending are the main data source for travel income, supplemented by tourist accommodation statistics made in accordance with Council Directive 95/57/EC of 23 November 1995 on the collection of statistical information in the field of tourism. The source used for travel expenditure is the travel survey for the resident population. It is supplemented by international air and sea transport statistics and other relevant statistics.

The Border Interview Survey is a sample-based interview survey made to foreign visitors to Finland, where 25 000 to 35 000 foreigners leaving the country are interviewed. The survey collects information about spending by foreign visitors in Finland. Data collection is carried out by face-to-face interviews. The survey is made around the year at major airports and boat terminals, in the border crossing points of South-Eastern and Eastern Finland and on trains between Finland and Russia. In the summer data are also collected on transport crossing the land borders of Northern Finland and in the summer at the airports of Rovaniemi and Kittilä. In the border interviews the survey unit is person. Two-stage sampling is used, where the target populations are formed of survey days and work shifts and persons interviewed. Survey days and shifts are selected at random from a pre-defined population. During each shift survey persons are drawn to the sample by systematic sampling, the selection interval being between five and 50 depending on the location and season.

The Finnish Travel Survey is a sample-based interview survey, where data required by the European Union directive on tourism statistics are collected about the demand for tourism services and costs incurred travelling. The survey has been conducted regularly starting from 1991. The survey methodology was revised in 2000, when monthly data collection replaced

the previous quarterly one and a method of two parallel samples was introduced. The samples are independent of each other, which means that different persons are interviewed each month. The interviews are made as computer-aided telephone interviews (CATI) at Statistics Finland's telephone interview centre. The population of the survey comprises persons aged 15 to 74 permanently resident in Finland. The samples are drawn by systematic sampling from the Central Population Register. Around 2 200 sample persons are picked for each sample. Monthly around 1 600 persons are interviewed, the non-response being around 27%. The transition to monthly interviews and introduction of a parallel sample has increased the number of observations and improved the quality of results.

### *Transport services*

Data on imports and exports of transport services are primarily obtained by separate surveys. Data applying to imports and some exports of transport services by sea are derived mainly from statistics on "Income and expenditure of foreign sea transport", compiled by Statistics Finland's Business Trends department. As freight income of sea transport is recorded freight income from freight transported by Finnish shipping companies on their own or chartered vessels in transport between Finland and foreign countries and income from transport between third countries. Expenditure on freight is estimated in connection with the CIF- FOB conversion of imports. The CIF – FOB conversion of goods imported is made in Finland using the benchmark method, which means that at intervals of certain years a special survey is conducted on the share of transport and insurance costs in imports valued at CIF prices. Transport costs included in imports calculated by the above benchmark method are recorded as expenditure on freight. Data on exports using air transport services are requested from the domestic companies engaged in foreign air transport. The income of foreign airline companies from Finland is estimated using data from the said companies and on market share data of air traffic originating in Finland. The share of income and expenditure on foreign railway transport is obtained from the, as yet, sole domestic rail transport operator. Export income by road transport from abroad is based on expert opinion supplied by the Finnish Trucking Association and, since 2001, on surveys conducted by Statistics Finland regarding foreign trade in services. Expenditure on road transport abroad is also based from 2001 on the inquiry on foreign trade.

### *Insurance services*

Imports and exports of insurance services are to be found in surveys of insurance corporations operating in Finland. Respondents are requested to detail their foreign insurance operations for the following quantities: outgoing and incoming reinsurance, life assurance and retirement pension fund's income and expenditure acquired from the rest of the world (by people living in the rest of the world), other primary insurance acquired from the rest of the world and purchases and sales from the rest of the world of auxiliary insurance services. The survey covers all insurance corporations in Finland.

In the Insurance Survey, insurance corporations operating in Finland are asked to supply figures for reinsurance payments from the rest of the world, gross, and payments to the rest of the world, gross. The same questions are

presented in respect of reinsurance payments transferred (sent) to the rest of the world. In respect of life insurance and pension fund's international operation, the questions concern gross premiums and gross claims, commissions, other earnings, and other costs. The same questions were asked about freight insurance and other direct insurance obtained from the rest of the world as about life insurance and pension funds. Additionally, the survey asked about income obtained from the rest of the world and payments to the rest of the world for ancillary insurance services.

Exports of insurance services are calculated from the above data so that, with respect to reinsurance received from the rest of the world, the item income from the rest of the world, gross, less outlay flows, gross, to the rest of the world, is considered to be exports of services. In respect of ancillary insurance services, the volume of exports of services is likewise income from the rest of the world less payments to the rest of the world. For other types of insurance, average domestic insurance service charges for such types of insurance on premium income from the rest of the world are counted as exports.

Imports of insurance services are calculated from the above data, so that with respect to reinsurance paid to the rest of the world, outlay flows to the rest of the world, gross, less income flows, gross, from the rest of the world, are considered to be imports of services. We have no current data on the number or volume of direct business underwritten in the rest of the world. However, we make a certain judicious estimate of the volume of direct business underwritten in the rest of the world, on the basis of which we calculate the average domestic insurance service charges for the imports of direct business as described above to calculate exports.

The conduction of the survey concerning the year 2001 was transferred from Statistics Finland to the Insurance Supervision Authority. Its content remained identical to that described above.

### *Other services*

Imports and exports of services also include royalties and licence fees, which earlier belonged to property income. Such data are to be found in the foreign trade survey.

### **5.17 Imports of goods**

Imports of goods are described in Section 5.15.

### **5.18 Imports of services**

Imports of services are described in Section 5.16.

## ***Chapter 6 The balancing or integration procedure and validating estimates***

### ***6.1 GDP balancing procedures***

Balancing the national accounts is the stage when the concept of the development and structure of the economy is aggregated. The balancing procedure, which applies to a given year, is never an isolated event. Instead, it is always tied to the preceding time series and especially to the previous year.

Balancing is therefore the pith of national accounting compilation without which it would be the simple addition of disparate data. Balancing is performed almost in the same way from year to year. The preliminary data are balanced on the aggregated level, the final figures are balanced in the supply and use tables on the product level.

#### ***6.1.1 Stage prior to balancing***

Balancing is preceded by the calculations of sector investigators in statistical areas belonging to each. In these calculations, source material data are revised to comply with national accounting concepts. As they compile their own calculations, sector investigators must pay attention to key figures and contingencies. The calculations in each statistical area entail paying attention to the following aspects in particular:

- \* changes in value, volume and price from the previous year
- \* corresponding changes from the previous version
- \* changes in absolute levels compared to the previous version
- \* consistency between wages and salaries and employment, measured in terms of a realistic level-of-earnings development (industry calculations)
- \* consistency between volume development of value added with labour input, measured by changes in labour productivity (industry calculations)
- \* consistency between employment with hours worked measured by hours worked for each employed person (industry calculations)
- \* real disposable income: nominal disposable income deflated by the price index of final consumption expenditure (households)
- \* savings rate: relation of savings to disposable income (general government, households)
- \* net lending level (sector calculations).

#### ***6.1.2 Checking of detailed calculation entities***

In conjunction with balancing the preliminary accounts, each industry, sector or other calculation entity is sifted through in summary discussions, so-called adjustment sessions. Such discussions involve 2 – 4 controlling staff and one or more sector investigators.

Examination of the individual calculation entities occurs according as the data near completion. Each calculation entity is sifted through, paying special attention to the above aspects. Besides that, discussion takes place concerning data sources, their availability and usability, changes that have

occurred either in data or in calculation methods and other background information bearing on the matter.

The overall picture of the economy gradually takes shape and is refined when most of the calculation entities are complete. The situation is continually monitored and for this reason time stamps are attached to the properties of the computer system. The overall concept can begin to be formulated, however, only when all the pieces are in place.

### *6.1.3 Compilation of balance of total demand and supply*

The balance of resources and expenditure, or the national economy balance of supply and use, combines aspects of the economy, the information illustrating production and use of goods and services.

#### *The production approach*

When all the production and generation-of-income accounts of industries have been calculated, the result is the gross value added of the economy at basic prices as the sum of gross value added of all industries. By adding taxes on products and deducting subsidies on products from this value, GDP at market prices is obtained.

When imports of goods and services from foreign trade calculations are added to GDP at market prices, the aggregate supply is obtained.

#### *The expenditure approach*

In order to calculate aggregate demand, the following items are transferred to the balance (entity from which data are derived given in parentheses):

- \* Exports of goods and services (from foreign trade calculations)
- \* Private final consumption expenditure (from final consumption expenditure calculations of households and other non-market output item in the production account for non-profit institutions serving households)
- \* Public final consumption expenditure (from final consumption expenditure of central and local government and social security funds, i.e. other non-market output of production accounts by industry added to paid social benefits in kind, or purchases from market producers)
- \* Private investment (from total gross fixed capital formation of market output and non-profit activities by industry)
- \* Public investment (from total gross fixed capital formation of public activities by industry)
- \* Change in inventories (from inventory calculations).

The total of demand items calculated in this way and aggregate supply differ from each other in preliminary calculations. This discrepancy, a statistical one, is posted on the demand side and the aggregate demand is obtained, which is then equal to aggregate supply. The total of demand items (without the statistical discrepancy) decreased by imports reflects the GDP estimate calculated through demand.

#### *The income approach*

The third option for calculating GDP, that of independently estimating it from the income approach will not be calculated in this context. The totals of

the wages and salaries amount from industry calculations and employers' social contributions (compensation of employee) are adjusted in accordance with corresponding data in the household and rest-of-the-world sectors. This adjustment is made by industry in relation to the wages and salaries of market producers and employers' social contributions..

The other income components of value added: consumption of fixed capital and other taxes on production less other subsidies on production are shown in accordance with the totals of the production and generation-of-income accounts by industry. The aggregate totals of taxes and subsidies are determined primarily in accordance with general government data.

While there is no independently calculated GDP estimate as the sum of income components, there have been trial calculations made. Structural business statistics data make feasible calculations of a gross operating surplus estimate in many industries. So far such calculations have only been examined as an interesting source of comparison as the gross operating surplus estimate used in such calculations contains numerous risk factors.

#### **6.1.4 Preliminary balancing of resources and expenditure**

Finland's national accounts, both the preliminary version at current prices, and the preliminary and final versions at constant prices, are balanced to the level of balance of resources and expenditure components. Only in some individual cases is balancing by supply and demand of products used in the preliminary version.

When analysing the balance of resources and expenditure, attention is paid to the same features as when calculating individual entities: the value of separate balance of resources items, changes in volume or price from the previous year or deviations from the previous version. Attention is also paid to the level of earnings and to productivity at the level of the overall economy.

A key factor is the statistical discrepancy between supply and demand. In the preliminary version of the national accounts, a modest difference is acceptable and is posted on the demand side. If the statistical discrepancy is too high, efforts are made to modify it. No exact measure of scale exists. In determining the need for adjustment, consideration is given to the absolute level of statistical discrepancy, the absolute change compared to the year before and the change in the influence of the statistical discrepancy on GDP growth (contribution). The statistical discrepancy must be approved in practice if it is not greater than +/- 1% of GDP at current prices and its contribution to the annual change in GDP is not greater than +/- 1%. This rough level balancing is conducive to and partly facilitates final compilation.

The statistical discrepancy showing the eventual need for a balance of resources is obtained when supply and demand of construction have been reconciled. The level of construction investment is determined based on the production of new construction, major improvements and real estate mediation. The supply of such products at basic prices must first be converted to purchasers' prices. The variant at the aggregated product group level of this final version at purchasers' prices is a trifle inexact, as the taxes on products associated with the services in question are not balanced by

product. Estimated supply at purchasers' prices is, however, considered more trustworthy at this stage, and the discrepancy with the construction investment total by industry is balanced by adjusting the investment data of industries, this being data for the real estate ownership and leasing industry as a general rule.

If it is desired to reduce the statistical discrepancy, there are – at this stage – neither items that will be automatically changed nor automatic procedures for making the change. First of all, attention is paid to items which are least reliable because of the data source. Typically unreliable, due to its often deficient basics, is change in inventories. Private investment can also be adjusted. A need for adjustment may sometimes be found in households' final consumption expenditure. If there is not sufficient adjustment potential in the demand components, recourse must be had to the production account by industry and adjustments made, for example, to intermediate consumption by industry. This changes the GDP level in a way that tends to even out the balance of resources and expenditure. In principle, data for each of the industries can be adjusted, but in practice such adjustments tend to be limited to a few of the larger industries.

The consequence of balancing the statistical discrepancy is a change in the scale of various economic activities. There are no absolute limits set down for the scale of change. Figures are compared to the original figures or to those of the previous year or previous version. Statistics Finland seeks the highest possible transparency equally with respect to preliminary balancing. Changes that are made, if any, must always be justifiable in the view of both statistics users and source data compilers.

Supply and demand at current prices are calculated as dependent on each other in many ways and the statistical discrepancy is generally fairly easy to keep tolerable. The difference arises from the disparity between supply and use of intermediate consumption and the absence or incompleteness of data relating to the flow of investments or consumer goods. From the balancing standpoint, it is very problematic if statistical discrepancies at constant prices and current prices have a different sign or start to move in contrary directions in the time series. Thus, improvement of one usually leads to exacerbation of the other, unless one is in a position to influence price ratios.

The final balancing is made both at current and constant prices.

### ***6.1.5 Final balancing of resources and expenditure***

At this stage the product range is added to the evaluation. This means compiling supply and use tables at current prices and evaluating the equilibrium of the total economy by means of product balances. Use is made of 947 primary products and five combination (virtual) products that facilitate balancing. Industry classification is somewhat broader when compiling supply and use tables than it is for preliminary accounting. As far as manufacturing is concerned, the 3-digit NACE classification can be used, based on which the total number of industries is 184.

Combining the data of different phenomena areas yields a supply table at basic prices and a use table at purchasers' prices.

Using valuation items (taxes and subsidies on products, trade and transport margins), supply data can be adapted to purchasers' prices and use data to basic prices.

Balancing is based on two identities being valid for supply and use tables:

1. Identity by industry:

Output by industry = Input by industry, or

i.e. Output with respect to an industry = intermediate consumption + value added.

2. Identity by product:

Total supply by product = Total use by product, or

i.e. Output with respect to a product + imports = intermediate consumption + exports + final consumption expenditure + gross capital formation.

### *Manual balancing by product*

In practice, the work starts by inspecting basic price product balances, in other words, supply and demand by product and the difference between them at basic prices. Potential errors arising from a change of classification are adjusted at this stage, because they are usually the source of the more obvious discrepancies. This involves cases in which values belonging to another classification must be distributed among many product classification classes in the national accounts.

The actual adjustments are made at this first manual balancing stage either to supply at basic prices or for use at purchasers' prices, depending on which data are considered to be more reliable at the time. The supply data are generally more reliable at the product level and, consequently, they change less. Adjustments are mainly made from one product to another, where the products are considered to be close substitutes to each other and the changes made will spread the discrepancy more evenly. The coverage of the respective supply and use data is used as the basis. Total levels of supply or of intermediate consumption, imports or final use are not affected at this stage.

In practice, changes are made to values at purchasers' prices even if inspection of imbalances is performed at basic prices. This is because valuation items are calculated by product. In most cases, only relative shares of consumption at purchasers' prices are known for the purpose of calculating the margins. The values for margins are calculated using these proportions and price variants are obtained for purchasers' prices at basic prices. By making the changes in use data at purchasers' prices, the intention is to bring at the same time consumption at basic prices into balance and make the margins on products to correspond to special margin fringes. Such fringes are specific data about taxes on products collected by general government and subsidies on products expended, and the margins produced by trade and transport and other industries in terms of trade and transport services.

The necessary balancing adjustments are checked in respect to household consumption, foreign trade and gross fixed capital formation, insofar as they

impact each final use item. When the balancing adjustments have been made, the initial data in the supply and use tables are replaced with the new balanced figures. Following this, valuation items are again calculated, and this time it should be more accurate. Something can be said for the volume of change due to the fact that, for example, roughly 290 out of a total of 947 products were balanced manually in 2000.

### *Balancing of valuation items*

After manual balancing, the first task is to balance the price formation items automatically. At this stage, valuation items are very close to being accurate and the final adjustment is made so that, by totalling use by product, subsidies and taxes on products are made to correspond to subsidies granted and taxes collected, and taxes and the margins on trade and transport are made to correspond to the services that yielded the margins produced by the trade and transport and other industries. In other words, valuation in the use data is scaled in the correct proportion to supply.

Concerning supply, advancement to the most accurate product level only occurs from basic prices to producers' prices, i.e. customs tariffs and taxes on products (except non-deductible value-added tax) are added to the value of each product at basic prices and subsidies are deducted from it, if they apply. The question of whether they apply or not will often depend on legislation to establish whether supply comes under domestic or foreign output, and which industry produces the product. Price formation is usually known accurately and reliably up to the point of the producer's price.

Supply data are only transformed to purchasers' prices at a level at which supply of each product at basic prices is presented at the macroeconomic level. When the transformation to producers' prices already exists, use data are sifted for the valuation items of each product from producers' prices to purchasers' prices and they are then added, together with the producers' price transformation to the values of supply at basic prices. Of course, this transformation, too, is useful and necessary in order to check the purchasers' price equilibrium.

With the balancing of valuation items, the stage is reached at which the product balances at basic prices may have changed somewhat. The changes, in both the absolute and relative sense, are slight. Then again, the differences can now be checked at basic prices and purchasers' prices by product. The sum of the differences by product at the macroeconomic level is the statistical discrepancy from preliminary national accounts +/- possible changes in valuation items.. It shows the extent to which domestic supply and imports at basic prices cover demand items and how well domestic supply and imports at purchasers' prices cover demand items at purchasers' prices. The statistical discrepancy is of the same order of magnitude for both kinds of price. The difference between this and preliminary accounting balancing is that the product balances accurately pinpoint the products that are most likely to cause the discrepancy.

### *Elimination of statistical discrepancy*

The impact of eliminating a statistical discrepancy on value added is just as great as the statistical discrepancy itself. First of all, products are selected for which the discrepancy, after manual balancing and balancing of valuation

items, is clearly the most. If the discrepancy at the macroeconomic level is positive, i.e. supply exceeds use, the greatest are selected. If, on the other hand, the discrepancy at the macroeconomic level is negative, i.e. supply is less than use, the greatest negative differences are selected. The use and supply of the selected group of products is then re-examined.

To adjust the imbalance, either supply or demand is changed or in some cases they are both changed. The option selected will depend on how great the statistical discrepancy happens to be. Only when the discrepancy is large (close to +/- 1% of value added) do we avail of the combined impact of supply and use. Changes tend to be made to use, as a rule, because its level is not considered as reliable as that of supply.

Decisions as to which selected group of products shall be changed must again be based on the reliability of the product data for each. As a rule, supply and use data of general government may be regarded as extremely reliable. At the same time, supply imports and consumption exports may also be considered reliable after preliminary checking. Changes in inventories have usually been checked at the preliminary stage and a fair degree of confidence can be placed in the new level (which is very low, in any case).

Practically speaking, adjustments may be made to supply in industries which operate in institutional sectors such as financial and non-financial corporations, households and non-profit institutions serving households. For its part, consumption of industries operating in the above sectors may be adjusted for intermediate consumption, investments, or households' final consumption expenditure. A mitigating aspect at this stage is the fact that most products are by their nature almost exclusively either intermediate product inputs, investment goods or consumer products. When the imbalance affects such products, a decision can first be made as to whether use data are more reliable than supply data for some reason, and then increase supply at basic prices for the industries producing the critical products. When valuation items are in balance, supply at purchasers' prices is also in balance with use at purchasers' prices once supply at purchasers' prices has been derived again. At the same time, value added that is calculated using the production approach also increases/decreases to correspond to that calculated by means of final consumption.

More generally, when use data are not as reliable, consumption at purchasers' prices is increased/decreased directly. If the increase/decrease is made to intermediate consumption, the value added of the production approach again increases/decreases so as to correspond at the macroeconomic level to final consumption at basic prices. If the increase/decrease is made to final consumption, the value added of the production approach remains unchanged and the value added calculated through final consumption rises or falls together with it to the same level. If consumption (final or intermediate consumption) at basic prices is derived once more with the same valuation items, supply and use at basic prices will also be in balance.

### *Automatic balancing*

When the statistical discrepancy is eliminated, no further difference between supply and use arises at the macroeconomic level. However, product specific

differences may still occur. Differences arising between types of output are also a key factor. Use of a domestic market output or import for a given product will not necessarily correspond exactly to supply or import of the product on the domestic market, even if the product were to be in balance at the aggregate level (domestic output and imports together). Other non-market output and output for own-account use, on the other hand, are in balance at this stage. Sales (purchases) of other non-market output only involve households and as a rule they, too, are already in balance at this stage.

Automatic balancing is performed using an RAS algorithm programmed in IML language in the SAS system. Supply is not affected and peripheral data for consumption are established, i.e. levels of intermediate consumption and final consumption levels. First, so-called certain cases are taken aside from the matrices to be balanced, i.e. products which are already fully in balance, and some items for which no further change is wanted (for example, certain investments, households' final consumption expenditure, foreign trade and changes in inventories). The algorithm rapidly reaches equilibrium even if to reach three places of decimals will require a fair amount of reiteration. The difference must be less than 0.001 in a million, or EUR 1 000 per product. Finally, the balanced matrix is combined with the data that were initially put aside.

Directly compiled resources and expenditure that are fully in balance are to be found in this table, one in which statistical discrepancies do not appear either at the aggregate level or according to type of output. The levels of GDP calculated through production and final consumption are independently calculated in this version as well. A non-independent estimate calculated through the income approach is made in the balancing to correspond with the estimate obtained through the production and final consumption approaches, but the relationships between the income components of value added may still vary.

### *Other measures*

When the resource and expenditure equilibrium has been approved, data can be returned to sector researchers industry by industry. As a rule, changes by industry are minor and can be allowed to impact just the operating surplus.

Being that investments change in conjunction with, or at the same time as intermediate consumption and/or output, new figures for the consumption of fixed capital must be calculated from the capital stock model. One consequence of this change is that, first, the net operating surplus changes by an amount equal to the difference between new and old consumption, and it is then further altered by any change in intermediate consumption, or supply. Households' consumption expenditure is converted back to the COICOP classification, and any changes are also made visible through this classification.

### **6.1.6 Balancing sector accounts**

Sector accounts describe production and generation of income of various sectors of the economy, distribution of primary income and redistribution of income, use of income, capital formation and financing from the standpoint

of the decision-maker sector. Changes in the assets and liabilities of sectors by financial claims are presented in separate financial accounts.

### *Balancing between sectors*

Before the levels of items in the resources and expenditure balances are fixed, the items for current and capital transfers in the sector accounts can be reconciled with each other so that income received by one sector is always paid by some other sector. The annual accounting computer system contains a variety of tests showing the scale of the differences.

The following instances occur in the case of current transfers:

1. Regarding data for two of the sectors, it was agreed that either sector's data can be used (other current transfers between central government and local government, for example).
2. Sector data come as the total for other sectors (social contributions and benefits for the household sector, for example)
3. The correct levels of current transfers received and paid are decided separately (interest and dividends, for example, a separate balancing process).
4. One of the sectors is left as a residual when data about other sectors are known (business non-life insurance premiums and claim payments, for example).
5. The total data of the receiving sector are retained and broken down in the paying sector by separate calculation (direct taxes).

### *Reconciliation of balance of resources and expenditure with sector accounts*

The sector accounts total must tally with the balance of resources and expenditure. Aggregate quantities presented in the balance generally determine the totals of the following economic activities by sector:

- \* Operating surplus
- \* Consumption of fixed capital
- \* Final consumption expenditure
- \* Gross fixed capital formation
- \* Change in inventories

Data concerning final consumption expenditure are transferred as such from the household final consumption expenditure calculations and non-profit activities are transferred from the production accounts to the sector accounts. Government consumption expenditure is the sum of 'other non-market output' and social benefits in kind (direct purchases from market producers). Data on change in inventories are also available by sector.

The following balance of resources and expenditure items are determined on the basis of sector accounts:

- \* Wages and salaries equal the total of household and rest-of-the-world earned income.
- \* Employers' social contributions equal the total of those for all sectors (there are no employers' social contributions in practice in housing corporation, household or rest-of-the-world sectors).
- \* Taxes on production and imports equal total tax revenues of general

government and rest-of-the-world.

\* Subsidies equal total subsidies paid by general government and rest-of-the-world.

### *Comparison with financial account*

Net lending by sector compiled independently using financial accounts, referred to as “Financial transactions, net”, is compared to the so-called real side net lending by sector described above. Financial side net lending can offer useful information about real side net lending by sector. In practice, financial accounts and real side accounts are today compiled at different times. The former are first compiled in September of the year following the statistical year so that data concerning them are not yet available in February and July to compile the initial calculations of real side data. The schedule is currently being shortened to June, when net lending of financial accounts would be available when calculating the annual accounts in the summer.

## **6.2 Other approaches used to validate GDP**

The paragraphs “Stage prior to balancing” and “Examination of detailed calculation areas” in the preceding section (6.1) are part of the GDP validation procedure. They are presented there because they chronologically precede the balancing of resources and expenditure. Also the matters presented in the following Chapter 7 (Overview of the allowances for exhaustiveness) are closely related to the validation of GDP.

## **Chapter 7 Overview of allowances for exhaustiveness**

### **7.1 Compilation and balancing**

All three compilation methods for GDP (production, demand and income, of which the last cannot be considered entirely independent) are used in the Finnish national accounts. The most reliable results are obtained using the production approach. The basic data sources for calculating output and intermediate consumption are sound and exhaustive. The final demand items are calculated independently. Supply and demand are balanced in supply and use tables in the final calculations. Balancing was described in the previous chapter. The result obtained in preliminary calculations through demand is compared to GDP when calculated through production and the difference is recorded as a statistical discrepancy. The algebraic sign will alter in practice. Only one GDP figure calculated using the production approach is published. The statistical discrepancy is shown as a separate item on the demand side in preliminary calculations.

The income components of GDP can also be calculated independently. These data are used partly in the summary of the entire economy. Data sources regarding the operating surplus are largely that same as in the income approach. Compensation of employees is to be found in independent data (taxation assessments, accrual data regarding employer social contributions). Wages and salaries and social contributions for the total economy conform with these data. The total sum of wages and salaries of all industries is used for the total economy if it is higher than the figure of taxation assessment. The social contributions of all industries is changed if

there is difference between accrual data regarding employer social contribution and the total sum of social contributions by industries.

## 7.2 Main data sources

Statistics Finland's production statistics are extremely exhaustive. The Business Register covers all enterprises and corporations, non-profit institutions and unincorporated enterprises who are employers, whether subject to value added tax or on the tax prepayment register. Public administration units are on a separate database. The Business Register does not include agricultural holdings. They belong to a separate register of the Ministry of Agriculture and Forestry.

The Structural Business Statistics are also very exhaustive. The database combines all business data from the structural business statistics survey, the Business Register and business tax data. The Structural Business Statistics are treated in more detail in Chapter 11.

Data in the Structural Business Statistics and Business Register are used to compile the national accounts as a means of comparing data about establishments and enterprises at industry level. Likewise comparisons are made with other available data sources. Although the Structural Business Statistics and Business Register are high quality data sources, classification discrepancies and random variations can occur. Depending on the data sources and analyses, a hidden economy increment is added to the industry specific data. Changes in annual levels of value, volume, productivity and average earnings by industries are used in the final matching of industry specific data sources. Labour input and employment data are required to calculate productivity and average earnings, which thus form one of the foundations for compiling the national accounts.

The data sources for general government units are exhaustive. Statistics on the finances of municipalities contain financial data on all municipalities and joint municipality authorities. General government data is derived from the central government accounting system. The data concerning social security funds are also fully exhaustive.

During recent years, public-sector units have been gradually transferred to enterprises, from non-market units to market units. The transfers have been precisely recorded to ensure that all units are included in the calculations and that no duplicate calculations arise.

Structural Business Statistics and public-sector data furnish information not only regarding production and generation of income but about fixed capital formation and changes in inventory as well.

Other data sources for demand items are foreign trade statistics, balance-of-payment data and the Household Budget Survey. Household Budget Surveys are not conducted every year and substitute data sources or interpolations are used during interim years. Foreign trade statistics compiled by the National Board of Customs are considered to have a good level of exhaustiveness. Minor corrections are made to the objectives of the balance of payments and the national accounts in order to attain full exhaustiveness. In calculating foreign trade in services, a transfer has taken

place from statistics based on the foreign transactions of banks to statistics based on a survey of enterprises.

The key materials of product data are manufacturing commodity statistics and foreign trade statistics. Because the manufacturing commodity statistics are not as comprehensive as the manufacturing structural statistics, coverage is ensured by raising the data to aggregate levels of manufacturing output and intermediate consumption.

An estimate of the hidden economy is made by utilising special studies, employment comparisons between the Labour Force Survey and the national accounts and tax audit data. On the basis of such studies, the incidence of the hidden economy in Finland is not very marked. Due to the method of calculation, part of the hidden economy is always incorporated into the national accounts (construction, housing services). The use of tax audit data gives only an indication, because the audits are not representative samples. Due to the nature of the calculations, an exact assessment of the hidden economy is not feasible.

### *7.2.1 Compiling households' final consumption expenditure*

Next, we will examine the use of certain key data sources in compiling households' final consumption expenditure and the procedures by which the correctness and compatibility of final consumption expenditure estimates are examined.

The data sources used for households' final consumption expenditure are the Household Budget Survey, turnover data for retail trade from various sources, data on organisations in the trade sector and data generated through calculating production. The calculation method and comparison of data sources are described in Chapter 5.

Data gathered by the tax administration are the central source of data in Finland's statistics system, in order to minimise the response burden by enterprises. Tax data serve at least indirectly in that way as a means of calculating households' final consumption expenditure, especially when branch statistics on the distributive trades are being used.

Statistics on the distributive trades do not for the moment yield sales data by product. Instead, turnover data of retail establishments by branch of activity are available, as produced by Statistics Finland's Business Register for all branches of activity at the narrowest classification level. The data are mainly based on data gathered by the tax administration. Such data are not usually available until final consumption expenditure figures are calculated. When assessing preliminary data, use is made of data on changes in turnover at a broader classification level produced by short-term statistics on the distributive trades. The reform of short-term statistics on the distributive trades began at the start of 1998. In addition to the data collected directly from enterprises, information is now also to be found in the tax administration's payment-control data on VAT and employers' social security contributions. Data collected directly from enterprises are still needed not only for timing reasons but also to improve the clarity by branch of industry for large multiple-activity companies. On the other hand, compiling statistics by business does not achieve clarity by branch of

activity in the establishment statistics, which would be desirable from the standpoint of calculating final consumption expenditure.

The result obtained is an estimate of households' final consumption expenditure derived from retail trade statistics. In order to determine the final estimate in accordance with the national accounts, figures are compared with corresponding estimates of final consumption expenditure derived from other sources (for example, the Household Budget Survey) and the best is selected.

### 7.2.2 *Gross fixed capital formation*

Data on investment from the supply standpoint are obtained for residential and other buildings.

The supply of buildings is obtained by adding the client's costs, value added tax on construction and real estate commissions (including value added tax) to the value of new construction and renovation at the construction sector's basic prices.

New construction data are based on building permits and the prices of completed buildings. Building permits are granted by municipalities for a fixed period and give the right to construct the building itemised in the permit. Local authority building inspectors monitor successive construction stages. These municipal inspections are compulsory. Inspectors report data to the Population Register Centre's data system, from where Statistics Finland obtains data mainly on building type and cubic metres. The data to be found in this database are used to calculate value and volume. Data are available on the market prices realised for completed buildings, and a detailed classification based on the structure of various types of building helps to calculate the volume at constant prices.

Permit and pricing data are very exhaustive and include own-account construction. All types of construction are classified, so that a value at basic prices is also obtained for own-account construction (e.g. individual houses, summer cottages, agricultural buildings).

The output of renovation is based on data produced by repeated surveys on the level of renovation. The surveys are conducted by the building production laboratory of the Technical Research Centre of Finland VTT. The surveys have been made in 1990 (KORV090), 1995 (KORV095) and 2000 (REMO2000). In the sample surveys the value of renovation and the extent of renovation measures were examined by type of building. The division between annual repairs and refurbishment is based on REMO2000, which includes an estimate of both measures.

In connection with the revision of supply and use tables the level of renovation was re-evaluated for the years 1995 to 2000. The volume index of renovation produced by Statistics Finland's Prices and Wages department was used as the volume of annual changes for the whole renovation. The volume index of renovation is based on the hours worked in newbuilding and renovation construction derived from Statistics Finland's Labour Force Survey.

The data sources used for civil engineering construction are taxation payment monitoring material (at the 4-5 digit level), Statistics Finland's employment, earnings and price data, advance data from the Structural Business Statistics and business accounting data for central and local government level.

The calculation of investments by branch of activity relies on the combined database for Structural Business Statistics, which contains combined data for each business from the tax administration, the Business Register and Structural Business Statistics direct survey. Separate establishment data are to be found in the Business Register. Such combined material can be regarded as very exhaustive. The hidden economy is not as likely to have an impact on gross fixed capital formation as on undisclosed turnover, for example.

In addition, there is a variety of separate data sources by branch of activity, such as for manufacturing. Separate calculations are also made for means of transport on the basis of data in the Central Motor Vehicle Register (ARK). Likewise, a centralised calculation is carried out for investments in computer software. Intangible fixed assets and costs associated with the transfer of land and other assets are calculated centrally. New information has been received from the Ministry of Finance on liability for asset transfer tax, due to which, since 1998, the asset transfer tax on securities has been deducted from the costs associated with the transfer of land and other assets.

Investment demand items are calculated by industries. Appropriate supply data are available for calculations by branch of activity. The majority of gross fixed capital formation calculations are performed using separate data by branch of activity and comparing different sources.

### 7.3 Estimating the hidden economy

#### *Traditional underground economy, industries*

During the main revision of the Finnish National Accounts the figures of the underground economy have been checked and data added to national accounts levels. The table below shows the levels of the underground economy 2006 as it was in the report Finland's Non-Observed Economy. The changes were made according this data. Mainly relative share of underground economy from each activity and industry has been used.

	<b>Output</b>	<b>Intermedi ate consump tion</b>	<b>Value added</b>
<b>Construction</b>	508	76	432
<b>Bus/coach transport (non-scheduled)</b>	1.7		1.7
<b>Taxis</b>	7.7		7.7
<b>Road freight</b>	152.5		152.5
<b>Removal transport</b>	5.5		5.5
<b>Retail trade</b>	286		286
<b>Hotels and restaurants</b>	242		242

<b>Business services</b>	204		204
<b>Private personal services</b>	133		133
<b>Total</b>	1,540	76	1,464

The methods of estimation underground economy by industries has been described in that report.

There are some changes in the Finnish legislation against underground economy during latest ten years. Concerning repair construction work and use of domestic help a new tax discount system to households was introduced. The results of this system has been described in our Inventory, chapter 3.2.2 and 7.3.2. Also the Finnish Tax Authority has given some registration orders concerning foreign workers in Finland. The results and data obtained this way are scarce. This follows from many reasons e.g. the short time workers don't know the system or they are employees of foreign labour leasing enterprise, some are so called sent workers and so on.

The forthcoming new IT-system of national accounts includes a module to underground economy. This means more systematic calculation of underground figures in the future. The system will be introduced during the next year.

### *Integration of estimates for illegal activities*

The methods and calculations of estimates of illegal activities were included to the report Finland's Non-Observed Economy 2006.

As part of major revision of national accounts Statistics Finland has integrated estimates of illegal activities in the data. Before only some estimates of prostitution and smuggling were included to figures of consumption expenditures and imports.

Now these estimates on prostitution, and smuggling of alcohol and tobacco were revised according the methods in the Non-Observed Economy report and figures of drugs were calculated and integrated to the accounts.

Drugs:

The calculation of drug use is based on primary sources mainly collected by The Research and Development Centre for Welfare and Health (RDCWH). The data were the number of people (15-54 years) that had used drugs, six different drug types, street price information and the average number of days in the year drug used by types. The use was divided to regular use and occasional use. When number of users, dose prices and days were multiplied the result is value of total use (street value). The table next shows the process for 2006:

2006						
Regular users						
	Users % of population 15-54 years.		dose	á/g	days/year	total
cannabis	0,9-1,1	21000	0,5g	9	100	22,7
amphetamine	0,2-0,4	11000	0,4g	25	200	22,0
opiates	0,1	800	0,5g	100	200	8,0

ecstasy		3000	tabl	16	30	1,4
buprenorfin		2100	tabl	35	200	14,7
cocaine		500	0,5g	100	200	10,0
Total						78,8
			marginal 65 %			51,2
			imports =			27,6
<b>Occasional users</b>						
cannabis	2	85000		9	20	4,2
amphetamine	2	70000		20	20	11,2
opiates	0,05	17500		100	20	17,5
ecstasy	..	4000		16	30	1,9
buprenorfin	0,05	17500		35	30	18,4
cocaine	..	500		100	20	1,0
Total						54,2

The main source is the RDCWH report to EMCDDA. This source is most exhaustive and includes report material from different official sources like customs, police and health organisations. This makes the possibility of double counting small.

There is no estimate for a separate intermediate consumption because smuggled drugs are transported more or less hidden to other products and packages. Also storing must be unofficial and with legal products.

There was no good information on relation of purity and price and so the margin represents both together. The used margin is a rough estimate. The laboratories of Customs and Police make analyses of the confiscated drugs. However there is no information of the drug price according to purity. The purity percent varies strongly, from near zero to full pure content and purity can vary according to drug.

Purity can have effect on street price but there is no information on actual import price. Normally police and customs tell an estimate of street price.

#### Cigarettes:

The source used for smuggling estimate is Tobacco Statistics by Statistics Finland. This statistical data includes both legally used tobacco and confiscated tobacco. It has estimates also of non-taxed tobacco bought abroad by travellers.

The amount of confiscated tobacco varies from year to year. From 1995 onwards lowest amount is 1.4 mill cigarettes and highest is 71.7 mill. From 2002 to 2008 lowest amount is 13.6 mill and highest 32.6 mill.

Smuggling estimates are based on average percentage of confiscated cigarettes.

According to Customs about 85 % of cigarette confiscations were made by the Eastern District of Customs, regarding smuggling from Russia. In Finland there is no illegal tobacco factory.

All the illegal estimates have been added to the national accounts data in the major revision.

The following table is from the report Finland's Non-Observed Economy, except GVA that is revised as published 2009.

**Table Non-observed economy, 2006, million eur**

	<b>Output</b>	<b>Value added</b>	<b>Imports, goods</b>	<b>Imports, services</b>
<b>Total</b>	1,734	1,618	55	23
illegal	194	154	55	23
underground	1,540	1,464		

The import figures only apply to the illegal economy.

Gross value added at basic prices in 2006 was EUR 143,657 million, and therefore the share of the non-observed economy was 1.13 per cent. The illegal economy alone would have amounted to 0.1 per cent and the traditional underground economy to roughly one per cent.

### **7.3.1 Use of tax audit data**

Special tax audit reports have been in use since 1996. Due to the way in which audits are performed, it has not been easy to use results for the purpose of the national accounts. Tax audits are generally performed on enterprises whose tax dealings give rise to suspicion.

This means that only a rough assessment can be made on the basis of tax audits. Tax audit data have been used in conjunction with other sources of data on the hidden economy. Three kinds of income are involved in tax audits: undisclosed wages and salaries, additions to income and so-called disguised dividend distributions. Finland's national accounts are mainly based on the production approach. From that standpoint, the most important of the three hidden economy items is that of hidden additions to income because it increases aggregate income (and production). The other two undisclosed income items are divisions of value added. Naturally, these two items are important in the income approach.

As was remarked above, a drawback of tax audits is that they are only performed as a rule when tax fraud has been suspected. Only in two of the instances in question (taxis, restaurants) were the inspection cases selected in a way that was representative of a particular sector. Only in these two instances were the inspections performed without a prior specific reason. Based on these instances, no generalisations can be advanced without more presumptions. In any event, for the two industries in question the results have been used in the national accounts.

The results for other industries are not as clear and the inspection material only gives an estimate of the upper limit of the hidden economy. The results of tax audits have been used together with other sources in order to throw light on the hidden economy.

### 7.3.2 Hidden household services work

The estimate of unregistered household work is based on the Niilola et. al. research on the use of domestic tax credit. The survey they conducted indicated that the amount of hidden work decreased significantly after the introduction of the domestic tax credit in 2000, as shown in Table 54b.

**Table 54b. Assessment of the amount of hidden domestic work (%) before and after the introduction of domestic tax credit, based on the responses of a sample of entrepreneurs.**

	Before domestic tax credit	After
Cleaning	62 %	26 %
Renovation and repairs	57 %	23 %
Other services	45 %	18 %
Average	58 %	24 %

Source: Niilola et. al. (2005), page 85, table 9.

These data refer to enterprises as suppliers of the domestic services, not to private households. It is assumed that the share of hidden work is approximately the same. Since the LFS employees are mostly other than cleaners or repairmen, the figures for “other services” are used as the shares of hidden work in industry 95. The shares of 18 percent in 2003 and 45 percent in 1999 (before the introduction of the domestic tax credit) are taken as the baselines in the estimation of hidden work.

*Sources:*

Niilola K., Valtakari M. ja Kuosa I. (2005) ”Kysyntälähtöinen työllistäminen ja kotitalousvähennys”. (”Demand-based employment and domestic help tax credit”). Ministry of Labour. Helsinki. (In Finnish with English summary).

## 7.4 Comparison of employment in national accounts and Labour Force Survey

### 7.4.1 Objective

The objective was to compare employment figures data on the number of hours worked in the national accounts and the Labour Force Survey, and to analyse the differences and their causes. An effort was made to highlight potential development targets. Figures for 1995-1997 in accordance with the SKT 95 reform are under scrutiny. Table 55b contains a comparison of the numbers of employed persons for the years 2003 and 2004.

In compiling the national accounts, recourse is had to the Labour Force Survey, regional employment statistics, employment data in the Business Register, and separate data on industries. Employment is defined differently according to the source, which leads to differences in overall employment

levels and data on particular industries. Persons can also be classified in different sources as belonging to different industries.

A comparison was made of all types of employer together and separately for the private and public sectors. In the public sector a distinction was also drawn between central and local government. The investigation was carried out for all employed persons and separately for self-employed persons and employees. This report mainly investigates employed persons as a whole. A brief reference will be made to other comparisons.

Any differences between statistics are examined both as numbers of employed persons and as percentages. A percentage difference denotes a statistical difference in relation to the national accounts.

#### ***7.4.2 Differences in concepts and definitions***

Differences between the national accounts and the Labour Market Survey arise from conscripts and conscientious objectors doing alternative service, among other factors. These are classified as employed in the national accounts but not in the Labour Market Survey. The second big difference is that in the accounts the employed are defined in accordance with the boundary of the economic territory, but in the Labour Market Survey according to nationality. Thus, Labour Market Survey figures omit immigrants in Finland but include Finns employed abroad. In addition, the hidden economy can also cause a discrepancy.

A relationship is always sought between the employment and labour input figures in the national accounts and changes in production. The sources used for this purpose are, in addition to the Labour Force Survey, statistics which reflect production such as the Business Register, manufacturing statistics and other structural business statistics.

#### ***7.4.3 Aggregate level***

Several similar studies have been carried out during the last two decades. Previously the figures in the national accounts were lower than those in the Labour Force Survey. This is also the case now. The difference in the employment figures was greatest, 2.8% (56 400 employed), in 1995, and the greatest difference in the number of hours worked, 5.7%, was in 1996. The smallest differences were in 1997, with 1.4% (30 500 employed) for employment and 4.3% for hours worked. The difference of integers for the years 2003 and 2004 is clearly smaller: in 2003 the national accounts were 0.4% lower than the Labour Force Survey level, and in 2004 a tad higher than the Labour Force Survey (+0.01%).

#### ***7.4.4 Industries***

The classifications by industry in the national accounts (NA) and the Labour Force Survey (LFSTAT, or Labour Force Statistics) are almost identical. There are some discrepancies. In addition, the same person may be classified in different industries in the source statistics used by the LFSTAT and the national accounts. There are differences in the ways that the statistics define the public sector, which leads to differences in how industries are reviewed. In the LFSTAT, the public sector is based on the so-called employer type classification, whereas in the national accounts those employed in the public

sector belong to public non-market production. In addition to the breakdown by industry and sector, there may be other differences in figures due to the sampling method used in the Labour Force Survey.

In broad outline, the differences in the employment figures in industries tend in the same direction as the hours worked. The differences are generally higher when comparing hours worked than when comparing employment levels.

#### *Agriculture, hunting and forestry (A)*

Employment figures for this industry are at practically the same level in the different statistics. In 1995 and 1996, the national accounts figures were lower than in the LFSTAT and in 1997 the opposite was the case. The difference was roughly 3% in 1995 and 0.5% in 1997. This amounts to roughly 700 employed persons in 1997. Agricultural workers who come to Finland from abroad are not included in LFSTAT figures, but they should be in the national accounts figures. Information is difficult to obtain, however. The number of hours worked was almost even in 1995 but the difference rose to just under 2% in 1997 with the national accounts figures being higher. Employment figures concerning forestry were drawn from the LFSTAT and from Forestry Research Institute labour force statistics. Hunting labour input is recorded only in hours, the share of the number of self-employed hours being roughly 1% at the aggregate national level. The national accounts level was a few percent higher than LFSTAT in the comparison of 2003 and 2004. The increasing number of foreign casual workers in primary production supports this difference in numbers.

#### *Fishing (B)*

The difference in fishing was roughly 4% in 1995. Thereafter it varied. The national accounts figures were higher in 1996 and lower in 1997. The same variation occurs in the figures for hours worked, with national accounts figures for hours worked being appreciably higher due to the fact that leisure fishing is included. The number of leisure fishing hours is about 5% of aggregate self-employed hours. The wide variation probably derives from Labour Force Survey sampling. The national accounts figures have been adjusted to changes in production. The share of fishing in the total value added of the national economy is minimal, being less than 0.1%.

#### *Mining and quarrying (C)*

The difference in employment figures for mining in favour of the national accounts is quite high: roughly 26% in 1995 and falling to roughly 10% in 1997. The difference in the number of persons employed comes to around one thousand. The difference in hours worked is also falling, in 1995 it was 16% and in 1997 it was 1% in favour of the LFSTAT. The national accounts figures are from the Business Register. In the new comparison (2003 and 2004) the difference is to the same direction but smaller.

#### *Manufacturing (D)*

At the aggregate level, manufacturing figures are lower in the national accounts than in the LFSTAT. The difference has varied between 4% and 2%. In terms of the number of persons employed, the difference is 17 000-4

000. There was a marked difference in 1995-1996 in manufacture of basic metals and metal products. In hours worked, the LFSTAT figures are a good 10% higher. The sources of national accounts figures are manufacturing structural business statistics and the Business Register. At the aggregate level the difference of manufacturing is slight in the new study (2003 and 2004), the national accounts level being around 1% below the LFS.

### *Electricity, gas and water supply (E)*

The employment figures for this industry are markedly lower in the national accounts than in the LFSTAT. The difference in the numbers employed is over 4 000 (-22%) in 1995 and over 2 000 (-12%) in 1997. The differences in hours worked were roughly 30% in 1995 and roughly 20% in the next two years. The national accounts figures are taken from the Business Register. The difference has remained the same in the new comparison.

### *Construction (F)*

The national accounts construction figures are higher. The difference varies from 1-2%. This amounts to a maximum difference of 2 000 persons employed. The difference has risen by a couple of thousand compared to the previous study as a result of an increase in the number of employed persons in the national accounts. The difference in the number of hours worked is around 15%, which is due particularly to extra hours in the national accounts accruing from own-account construction. Differences in classification are another reason for differences in the numbers of employed persons in the statistics of subindustries. The difference is still of similar type in the new comparison.

### *Wholesale and retail trade (G)*

Employment figures and hours worked in wholesale and retail trade do not vary much between the different statistics. The level of trade is a few percentages higher in the national accounts than in the Labour Force Survey.

### *Hotels and restaurants (H)*

The employment figures for this industry are likewise close, except in 1996 when there were roughly 2 500 more employed persons according to the LFSTAT statistics. The deviation may have been due to random variations in the Labour Force Survey. Hours worked are about equal in both statistics except in 1996 when the LFSTAT figures were 4% higher. The levels were fairly close to each other in the new study as well.

### *Transport, storage and communication (I)*

In 1995, the number employed in transport and communications was roughly 4% (6 000 persons) lower in the national accounts. The figures are at the same level thereafter. There was little difference in hours worked over the entire review period. The difference in 1995 was due mainly to the incorporation of the VR Group (formerly the Finnish State Railways). There are also differences in some subindustries according to definitions. At the aggregate level the statistics for 2003 and 2004 are close to each other, though there were some differences for communication.

### *Financial intermediation and insurance (J)*

Employment figures of the financial intermediation and insurance sector are higher in the LFSTAT for the entire period under review. The difference increased from roughly 2 000 employed persons in 1995 to 5 000 in 1997. The difference is due to the insurance sector and insurance and financial services. In the national accounts, the sources used for financial activities are banking statistics and the financial statements statistics of other financial institutions. For insurance the sources are data on financial statements gathered by the Federation of Finnish Insurance Companies. The sources are exhaustive. Fluctuations in service activities employment figures in the LFSTAT may be due in part to random variations. Differences in hours worked rose during the period under review from 3% to 12%. Differences in employment and hours worked are due to the use of different sources. The difference is also significant in the new comparison.

### *Real estate and business services (K)*

There are big differences between statistics in this industry. At the aggregate level, in 1995-1996 there were over 40 000 (30%) more employed according to the LFSTAT than in national account figures. In 1997 the difference was 33 000 (21%). The percentage difference for hours worked is of the same order as for employed persons. The difference in the employment figures arises especially from technical services, consulting services and cleaning. Differences between figures may be partly explained by the classification of public-sector activities in different industries in different statistics and by differences in the classification of management activities of holding companies. The difference was still great in 2003 and 2004, because of the same reasons.

### *Administration (L)*

National accounts and labour force statistics differ regarding public administration, education, and health and social services, due to which the differences by branch of activity are marked. Some of those employed in public administration in the national accounts are recorded in the LFSTAT in the two other above-mentioned industries. When these three industries are reviewed together, the differences are smaller. The national accounts figures were higher than the LFSTAT by roughly 26 000 employed persons in 1995, by around 33 000 in 1996 and by about 35 000 in 1997. When the number of conscripts is deducted from the national accounts figures, the difference between the statistics is smaller. Conscripts and conscientious objectors doing alternative service number roughly 25 000 annually.

Public administration employment figures are higher by around 30% in the national accounts, depending on the year. In terms of employed persons, this means roughly 50 000. The difference in hours worked is 36%-38%.

In the new comparison for 2003 and 2004 the differences in administration, education, health and social work are similar as before.

### *Education (M)*

Depending on the year, the difference in education is between 2 000 and 6 000 (1.5-5%), the LFSTAT being higher. The percentage difference in hours worked is around 40%.

### *Health and social work (N)*

The employment figures for health and social work are roughly between 15 000 and 7 000 (roughly 6%) higher in the LFSTAT than in the national accounts. There is a difference of roughly 10% in hours worked.

### *Other community, social and personal service activities (O)*

Employment figures for this industry in 1995 were 13 000 (15%) higher in the LFSTAT than in the national accounts. The difference increased gradually up to 19 000 (20%) by 1997. The hours worked differ depending on the year by between 25%-30%. The source for national accounts data was mainly the Business Register. In this industry the difference has also remained of similar type in the new comparison.

### *Household services (P)*

National accounts figures for persons employed are 50% higher on average, which means a difference of roughly 4 000. The difference for hours worked is in the same direction but is 5% higher. In the national accounts employed persons comprise persons with accident insurance whose total earnings are known. The employed are obtained on this basis. In 2003 and 2003 the national accounts level was still higher than that of the Labour Force Survey, although the difference has contracted considerably from before.

### *Public sector and private sector*

In the national accounts, those employed in the public sector are defined as being in only a few industries. Most are in public administration, education, and health and social work. The differences between statistics are about the same as for the types of employer mentioned above. At the aggregate level, the numbers of employed were 83 000 (15%) higher in the LFSTAT in 1995 and 60 000 (11%) higher in 1997.

In the private sector at aggregate level, the figures for employed persons are 17 000-34 000 higher in the national accounts, depending on the year. The percentage difference is 1-2%.

## **7.4.5 Summary**

There is a systematic difference between employment figures and hours worked in the national accounts and in the Labour Force Survey. The difference at the aggregate level in 1997 was 30 000 employed persons (1.4%), but 2003 and 2004 indicate that the difference at the aggregate level has in practice disappeared.

The omission of conscripts and conscientious objectors doing alternative service from the national accounts at the aggregate level increases the difference. It is hard to assess the impact of foreign nationals working in Finland and of Finnish citizens working in the rest of the world. The hidden

economy raises labour force statistics, if those interviewed answer honestly the questions put to them about employment, even though they work for undisclosed earnings. The business statistics and Business Register which serve as sources for the national accounts do not include the hidden economy.

The use of Business Register data as a source for national accounts may partly explain the lower levels they show. By using the Business Register as a source of employment estimates mainly in accordance with the concept of full-time employment data, it may not always have been possible to convert to the concept of the employed person.

There is a need for ongoing critical comparison of employment, there are clear differences in the statistics of certain industries.

**Table 55a: Comparison of numbers employed according to the national accounts (NA) and the Labour Force Survey (LFS). Summary, in thousands of persons.**

INDUSTRY	1997			
	KT	LFSTAT	DIFF.	%
A Agriculture, hunting and forestry	151.1	150.4	0.7	0.5
B Fishing	1.9	2.3	-0.4	-22.5
C Mining and quarrying	6.2	5.6	0.6	10.2
D Manufacturing	429.4	435.8	-6.4	-1.5
DA Manufacture of food products, beverages and tobacco	44.8	45.3	-0.5	-1.1
DB Manufacture of textiles and textile products	17.3	19.7	-2.4	-13.8
DC Manufacture of leather and leather products	3.2	3.4	-0.2	-7.4
DD Manufacture of wood and wood products	30.0	32.7	-2.7	-8.9
DE Manufacture of pulp, paper and paper products; publishing and printing	71.8	73.0	-1.2	-1.7
DF Manufacture of coke, refined petroleum products and nuclear fuel	3.4	4.2	-0.8	-23.0
DG Manufacture of chemicals, chemical products and man-made fibres	18.4	17.9	0.5	2.7
DH Manufacture of rubber and plastic products	15.7	15.2	0.5	3.2
DI Manufacture of other non-metallic mineral products	14.1	16.2	-2.0	-14.8
DJ Manufacture of basic metals and fabricated metal products	54.3	54.0	0.3	0.5
DK Manufacture of machinery and equipment n.e.c.	59.3	63.2	-3.9	-6.6
DL Manufacture of electrical and optical equipment	56.2	54.1	2.1	3.7
DM Manufacture of transport equipment	22.9	19.9	3.0	13.3
DN Other manufacturing and recycling n.e.c.	18.0	17.0	1.0	5.8
<b>E Electricity, gas and water supply</b>	19.7	22.0	-2.3	-11.8
<b>F Construction</b>	132.5	129.9	2.6	2.0
<b>G Wholesale and retail trade</b>	262.9	262.9	0.0	0.0
<b>H Hotels and restaurants</b>	65.8	65.7	0.1	0.1

<b>I Transport, storage and communication</b>	163.7	163.6	<b>0.1</b>	<b>0.0</b>
IA Transport and storage	118	117	<b>1.0</b>	<b>0.8</b>
IB Post and telecommunications	45.7	46.6	<b>-0.9</b>	<b>-2.0</b>
<b>J Financial intermediation and insurance</b>	42.8	47.9	<b>-5.1</b>	<b>-11.9</b>
<b>K Real estate, renting and business services</b>	158.6	191.7	<b>-33.2</b>	<b>-20.9</b>
KA Real estate services	27.0	29.7	<b>-2.7</b>	<b>-9.9</b>
KB Business services	131.6	162.1	<b>-30.5</b>	<b>-23.2</b>
<b>L Public administration and compulsory social security</b>	165.0	108.7	<b>56.3</b>	<b>34.1</b>
<b>M Education</b>	140.9	145.4	<b>-4.5</b>	<b>-3.2</b>
<b>N Health and social work</b>	293.2	310.0	<b>-16.8</b>	<b>-5.7</b>
<b>O Other community, social and personal service activities</b>	96.7	116.0	<b>-19.3</b>	<b>-20.0</b>
<b>P Household services</b>	8.5	3.9	<b>4.6</b>	<b>54.1</b>
<b>Q Extra-territorial organisations and bodies</b>	0.0	0.4	<b>-0.4</b>	
<b>X Industry unspecified</b>	0.0	7.2	<b>-7.2</b>	
<b>Total</b>	<b>2 139</b>	<b>2 169</b>	<b>-30.5</b>	<b>-1.4</b>

**Table 55b: Comparison of numbers employed according to the national accounts (NA) and the Labour Force Survey (LFS)**

Industry/year	National accounts		Labour Force Survey		difference national accounts / Labour Force Survey %	
	2003	2004	2003	2004	2003	2004
<b>A Agriculture, hunting and forestry</b>	122 400	119 800	118 977	114 645	2.8	4.3
<b>B Fishing</b>	1 900	2 000	1 400	1 541	26.3	23.0
<b>C Mining and quarrying</b>	5 800	5 500	5 310	5 126	8.4	6.8
<b>D Manufacturing</b>	443 100	432 000	444 395	434 670	-0.3	-0.6
DA Manufacture of food products, beverages and tobacco	42 100	40 100	44 705	44 082	-6.2	-9.9
DB Manufacture of textiles and textile products	14 700	13 500	13 407	14 236	8.8	-5.5
DC Manufacture of leather and leather products	2 700	2 500	2 554	2 567	5.4	-2.7
DD Manufacture of wood and wood products	30 400	30 500	31 340	30 908	-3.1	-1.3
DE Manufacture of pulp, paper and paper products; publishing and printing	69 800	67 700	69 643	69 546	0.2	-2.7
DF Manufacture of coke, refined petroleum products and nuclear fuel	2 900	3 000	3 091	2 711	-6.6	9.6
DG Manufacture of chemicals, chemical products and man-made fibres	19 100	18 700	18 424	18 544	3.5	0.8
DH Manufacture of rubber and plastic products	16 900	16 700	18 730	20 273	-10.8	-21.4
DI Manufacture of other non-metallic mineral products	16 300	16 100	18 133	16 569	-11.2	-2.9
DJ Manufacture of basic metals and fabricated metal products	61 400	60 400	59 602	58 931	2.9	2.4
DK Manufacture of machinery and equipment n.e.c.	62 600	61 300	64 095	59 024	-2.4	3.7
DL Manufacture of electrical and optical equipment	63 000	62 800	60 121	61 274	4.6	2.4
DM Manufacture of transport equipment	23 100	21 000	20 133	18 036	12.8	14.1
DN Other manufacturing and recycling n.e.c.	18 100	17 700	19 222	17 372	-6.2	1.9
<b>E Electricity, gas and water supply</b>	15 800	15 500	19 956	18 625	-26.3	-20.2
<b>F Construction</b>	153 700	157 200	150 758	148 051	1.9	5.8
<b>G Wholesale and retail trade</b>	296 600	299 700	286 827	292 824	3.3	2.3
<b>H Hotels and restaurants</b>	74 700	74 900	75 711	74 472	-1.4	0.6

<b>I Transport, storage and communication</b>	169 000	172 100	172 999	171 525	-2.4	0.3
IA Transport and storage	125 000	127 600	124 605	125 599	0.3	1.6
IB Post and telecommunications	44 000	44 500	48 394	45 926	-10.0	-3.2
<b>J Financial intermediation and insurance</b>	39 300	37 700	49 343	48 913	-25.6	-29.7
<b>K Real estate, renting and business services</b>	239 800	244 500	263 625	266 313	-9.9	-8.9
KA Real estate services	39 000	39 600	33821	37 397	13.3	5.6
KB Business services	200 800	204 900	229 804	228 916	-14.4	-11.7
<b>L Public administration and compulsory social security</b>	173 800	173 200	118 087	116 716	32.1	32.6
<b>M Education</b>	159 600	161 200	166 462	171 338	-4.3	-6.3
<b>N Health and social work</b>	340 900	347 000	346 106	352 238	-1.5	-1.5
<b>O Other community, social and personal service activities</b>	113 300	115 600	131 636	133 169	-16.2	-15.2
<b>P Household services</b>	5 400	7 000	4 610	6 486	14.6	7.3
<b>Q Extra-territorial organisations and bodies</b>	0	0	331	775		
<b>X Industry unspecified</b>	0	0	8378	7 250		
<b>Total</b>	2 355 100	2 364 900	2 364 911	2 364 677	-0.42	0.01

## Chapter 8 Transition from GDP to GNI

The transition from gross domestic product to gross national income is made when the compensation of employees, taxes on production and imports, subsidies, interest, the distributed income of corporations, reinvested earnings on direct foreign investment, property income attributed to insurance policy holders and rents on land paid from the rest of the world to Finland are added in. Correspondingly, the same items paid from Finland to the rest of the world are deducted.

Economic transactions between Finland and the rest of the world match the balance of payments in the national accounts, except for financial intermediation services indirectly measured and exports and imports of construction services.

### 8.1. Compensation of employees

Wages and salaries, and employers' social contributions are recorded in this item.

#### *Wages and salaries received from abroad*

The tax payment statistics contain data on earnings obtained from the rest of the world by "natural persons" or households. This figure includes only the wages and salaries of persons employed during a stay less than six months abroad because tax is due on these earnings in Finland. The figure is increased by 50%, in which case it is estimated to include the wages and salaries of all with an employment relationship of less than one year.

Besides the tax payment statistics, there are data about wages and salaries earned in the rest of the world in Statistics Finland's Income Distribution Survey for the year 2000. It made a survey of **untaxed** wages and salaries earned in the rest of the world. Untaxed wages and salaries are earned from employment relationships of 6 to 12 months in duration. According to the

survey, untaxed wages and salaries earned in the rest of the world totalled roughly over EUR 100 million in 2000. When it is taken into account that the answers to such survey questions represent an evident selective downward loss, our estimate that wages and salaries total EUR 171.1 million for 6 to 12-month employment relationships in the rest of the world in 2000 may be regarded as satisfactory in relation to the income distribution statistics.

Employers' social contributions received from abroad are estimated as, on average, 16% of wages and salaries received from abroad.

### *Wages and salaries paid to the rest of the world*

The figures are based on Statistics Finland's expert estimation. The value is based on median salaries and on an estimate of the numbers of non-residents who have worked in Finland. The estimate puts the number of foreigners working in Finland 17 000 in 2002. According to the estimate, the average period of employment was four months per year and as average earnings a ten per cent lower pay than the average earnings calculated based on the domestic wages and salaries.

### *Calculation method and sizes of employers' social contributions related to foreign wages and salaries*

#### *1. Employers' social contributions paid from Finland to the rest of the world*

Employers' social contributions paid from Finland to the rest of the world are partly based on information obtained from authorities about the number of foreign citizens having worked in Finland in different years, and partly on the best estimates about the number of such persons. In addition, compensations of employees are based on the best available estimates of the wages and salaries obtained by foreigners in Finland. There is neither any direct information available on the social contributions paid by employers for foreign employees. Therefore the size of this transaction is estimated on the basis of the wages and salaries paid to foreigners in Finland. For lack of better information, it is assumed that social contributions paid by employers cover foreigners in ratio to the wages and salaries paid to Finnish employees by virtue of the regulations and agreements in force in the year in question. Table 56 shows the result of the calculation.

**Table 56. Employers' social contributions paid from Finland to the rest of the world**

Years	D12R Employers' social contributions
1995	11
1996	11
1997	21
1998	25

1999	28
2000	28
2001	29
2002	31
2003	33
2004	36

## 2. Employers' social contributions paid from the rest of the world to Finland

Salaries and wages paid from the rest of the world to Finland are based on statistics on payment of taxes compiled by the Tax Administration. There wages and salaries paid from employment relationships lasting at most six months are specified for residents of Finland abroad, who need not be Finnish citizens but whose centre of economic interest is in Finland. The above information is used to estimate the wages and salaries received from abroad by these persons from all employment relationships of under one year. Because there is no corresponding data source for social contributions paid by foreign employers to persons from the rest of the world who regard Finland as their centre of economic interest, the above-described inflated wage bill is used for evaluating the transaction in question. The method is to evaluate the social contributions paid by employers as proportions of the wage bill. Because insufficient and often unconvincing information is available from international sources about social contributions paid by employers in EU or OECD countries, it was decided in Finland to calculate the social contributions paid by employers as a relative proportion of the wage bill received from abroad so that the proportion used is somewhat lower than that paid in Finland. This proportion is of constant size, 16%, of the wage bill received from the rest of the world in 1995 to 2004. Table 57 presents the social contributions paid by employers obtained from the rest of the world.

**Table 57: Employers' social contributions paid from the rest of the world to Finland**

Years	D12K Employers' social contributions
1995	9
1996	18
1997	33
1998	54
1999	67
2000	82
2001	88
2002	81
2003	74
2004	74

### Employers' social contributions as a percentage of wages and salaries by type of insurance, percentage of wages and salaries in Finland in 2004

Payment type

2004

National pension and sickness insurance

- Private I	2.964
- Private II	5.164
- Private III	6.064
- Central government	
- Local government, parishes	6.814
	4.014
	4.014
<b>TEL</b> (Employees' Pensions Act) on average	16.8
<b>LEL</b> (Temporary Employees' Pensions Act), on average	17.8
<b>TaEL</b> (Pensions Act for Performing Artists and Certain Groups of Employees)	14
<b>KvTEL</b> (Local Government Employee Pension Act)	23.19
<b>KiEL</b> (Evangelical Lutheran Church Pensions Act)	27.00
Unemployment insurance contributions On wages and salaries up to EUR 840 940 million	0.6
Unemployment insurance contributions On wages and salaries exceeding EUR 840 940 million	2.5
Group life insurance contributions	
- Private	0.08
- Local government	0.10
Accident insurance contributions	
On average	1

## 8.2 Taxes on production and imports

Taxes on production and imports only arise as an item paid from Finland to the rest of the world. They comprise value-added-type taxes (D211) and taxes and duties on imports excluding VAT (D212) paid since 1995 by Finland to the EU. These items are to be found in the financial statements of central government, the National Board of Customs and the Ministry of Agriculture and Forestry.

Payments made to the EU since 1995 based on value-added tax are recorded as value-added tax.

Taxes and duties on imports excluding VAT include, in addition to regular import duties, import duties on agricultural products. Data on these are obtained from the National Board of Customs. Taxes and duties on imports have been payable to the EU since 1995.

Finland's national accounts contain data on taxes, subsidies and income and capital transfers between Finland and the EU since 1995, when Finland became a member.

The rest of the world account reflects income in four different tax brackets:

Value-added tax collected on behalf of the EU. The total EU value-added tax is taken directly from Financial Statement and Report of Central Government data. The data have a separate budget account (Budget item) for the value-added tax paid to the EU and the gross national income payment. These items are entered on a cash-basis principle in the Financial Statement

and Report of Central Government and national accounts. The value-added tax paid is considered to be an administrative payment without a direct connection to any given performance or economic transaction. Thus, no basis exists for timing adjustments or entries that are purely performance based.

Customs duties and clearance payments collected on behalf of the EU. The customs payments used in the accounts are based on data obtained from the National Board of Customs. The basis for entries is the payment due date, only authentically collected customs payments being taken into account.

Agricultural payments collected on behalf of the EU. Agricultural payments used in the accounts are based on data obtained from the National Board of Customs. The basis for entries is the payment due date, only authentically collected customs payments being taken into account.

Sugar payments collected on behalf of the EU. The sugar payments used in the accounts are based on data obtained from the Ministry of Agriculture and Forestry. The entry system is cash based, because allocating sugar payments at the time of production or storage is a very cumbersome task. Additionally, sugar payments are a relatively small item and investigating a timing correction would not significantly improve the quality of figures.

### 8.3 Subsidies

Subsidies arise only as an item paid to Finland from the rest of the world. They consist of subsidies on products (D31) and other subsidies on production (D39) paid to Finland by the EU since 1995. These subsidies are paid to farmers, among others.

In taxes and subsidies with the rest of the world in the Finnish national accounts there are included the funds received from

- the EAGGF's guarantee department
- the EAGGF's guidance department
- the ERDF for objectives 2, 5b, 6 and community initiatives
- ESF
- EU institutions by the Finnish Intervention Unit
- EU institutions by the Finnish Fund for Agricultural Development.

The main data sources for subsidies on products paid by the European Union are the financial statements of central government. While subsidies paid by the European Union in practice circulate via the State in Finland, they are treated in the national accounts as paid by the European Union. Total subsidies paid by the European Union and central government are to be found in the financial statements of central government, where the share financed by the EU is separated. Methods congruent with Eurostat Decision (15 February 2005) are applied to the treatment of EU transfers.

Subsidies on products, according to the financial statements of central government include part of the national support for agriculture and horticulture and European Union income support. The remaining subsidies in these subitems are classed as Other subsidies on production (D39). The division into subsidies on products and other subsidies on production is made by the Ministry of Agriculture and Forestry on the basis of special

analyses. Other subsidies on production consist of items recorded in the general subsidy accounts under the following headings: part of EU income support, environmental aid, the abandonment subsidy, the arable land afforestation subsidy, fisheries intervention activities and support to the fishing industry, EU participation in structural measures for the food industry and the rural economy. The source is the financial statements of central government. Counted under this are also aid for private storage paid by the Intervention Fund, other subsidies agreed by the Community and other industrial subsidies. The source is the financial statements of the Intervention Fund.

After a time adjustment has been applied to agricultural subsidies, the total subsidy amount is obtained. Some subsidies are financed by Finland and others by the European Union. The main subsidies are agri-environmental aid, aid for agriculture and horticulture and compensation for harvest losses.

All expenditure in the nature of income subsidies (this being inferred using the information from commercial accounts, Budget accounts, and other information mentioned above) and which are financed by income received from the EU are shown as income subsidies paid by the EU. Thus, subsidies are entered directly from the EU to the eventual receiving sectors. From the central government's standpoint, the revenue and expenditure are curtailed from the central government sector.

## 8.4 Interest

This section also describes the calculation of dividends.

The data sources for property income and expenditure consisted until 1998, foreign payment data maintained by the Bank of Finland and its direct surveys of enterprises. In addition, the Bank's own accounting data regarding its foreign payments of returns on capital and capital expenditure are used. From 1999 onwards the latter two data sources are used for property income and expenditure.

The Bank of Finland's statistics department's enterprise surveys are as follows:

- surveys of direct investments;
- surveys of foreign receivables and liabilities by sector, including corporations' and financial institutions' internal foreign receivables and liabilities;
- surveys of trade in securities directed at securities dealers.

The above Bank of Finland surveys are conducted each month. The results of the surveys are recorded on an accrual basis.

Enterprises receive interest income from abroad on direct investments other than of equity, i.e. on loans granted to foreign subsidiaries or foreign parent companies, or securities or other investments – loans, deposits or commercial credits.

Statistics on interest paid and received on all claims are compiled monthly, quarterly and annually using questionnaires on the foreign receivables and liabilities of businesses. About 35 reporting units are involved in the monthly surveys, about 80 in quarterly surveys and about 250 in annual surveys. Some enterprises respond at group level, which reduces the number

of respondents. Well over 500 businesses make up the total population. The survey on the foreign receivables and liabilities of enterprises applies likewise to receivables and liabilities between foreign subsidiaries and parent companies. Responses to the monthly surveys must be returned to the Bank of Finland not later than the 15<sup>th</sup> working day of the following month.

### ***8.5 Withdrawals from the income of quasi-corporations***

From 2004 onwards direct investment income from construction abroad has been recorded as withdrawals from the income of quasi-corporations. It is the same amount which is recorded in construction services in Balance of Payments.

### ***8.6 Distributed income of enterprises***

The distributed income of enterprises is in the form of dividends.

The dividends received by corporations from abroad or payable abroad are obtained on the basis of an annual survey of direct investments and are part of earnings on capital assets (Section 8.6 dividends and distributed branch operating profits). Foreign dividends receivable or payable on securities are to be found in the above-mentioned survey of foreign receivables and liabilities.

### ***8.7 Reinvested earnings on direct foreign investment***

The returns on direct equity investments are requested in conjunction with the annual direct investment survey of businesses (FDI survey), which is conducted by the Bank of Finland's Statistics Department.

The latest framework survey was conducted for the reference year 1999. As from the reference year 2003, the FDI surveys have been of a cut-off type, thus having fewer respondents and being less costly than the former sampled surveys.

The frames of the direct investment surveys are mainly based on the information on foreign ownership of resident enterprises in the official business register as well as on the register of consolidated enterprises maintained by Statistics Finland. The survey frame of the direct investments abroad has around 1000 units (parent companies in Finland), while the survey frame of direct investment in the domestic economy has around 2800 units (foreign - owned enterprises in Finland). For the 2007 surveys, the cut-off point was set at slightly above 90 per cent of the cumulative coverage of the main target FDI stock variable in the frame list, resulting in 170 respondents in the annual FDI abroad survey and in 380 respondents in the FDI in Finland survey. The cut-offs allow flexibility in the definition of the statistical unit, and the respondents may choose whether they prefer to report on a consolidated basis or by single enterprise. They are required to state which enterprises are covered by the consolidated report. The total values of the FDI abroad and in Finland are estimated employing balance sheet data by establishing a relationship between the FDI variables and the appropriate balance sheet variables.

Finland's reinvested earnings related to Finnish direct investment abroad and foreign direct investment in Finland cover both direct and indirect links

within big multinationals. In the annual FDI surveys, the resident direct investors report a profit & loss account for both directly and indirectly owned foreign affiliates.

The resident directly foreign-owned direct investment enterprises report consolidated profit & loss account that covers the profit & loss of both the directly foreign-owned enterprise itself and also its directly and indirectly owned subsidiaries.

Finland's data on reinvested earnings exclude holding gains and losses and extraordinary events. In the annual FDI survey, the respondents report both the total value of profit & loss account and additionally realised and unrealised capital gains and losses recorded in the total profit & loss account. With these data reinvested earnings excluding capital gains and losses and extraordinary events are compiled.

In the FDI survey instructions for capital gains and losses have been expressed as follows:

Capital gains/losses and other items not included in the results of regular operations include:

- incidental gains/losses arising from sale of assets
- valuation changes (e.g. write-downs on goods and investments held as fixed assets, exceptional write-downs on current assets and write-downs on financial instruments held as current assets)
- changes in fair value recognised as income or expense in the profit and loss account and write-downs on goodwill
- depreciation on long-time expenditure (e.g. depreciation on development expenditure, depreciation on consolidation goodwill and reduction in consolidation difference)
- exchange rate gains/losses
- loan and guarantee losses
- deductions from income for future expenditure and losses
- group contributions (e.g. unrequited payment of expenses incurred by a group company, loan repayments and coverage of losses)

Naturally the quality of the reported figures depends on the respondents willingness to report accurate data. In case of huge changes in the value of profit & loss account from the previous year, the compilers contact the respondents and ask if some unreported capital gains and losses or other extraordinary events possibly explain the change.

## ***8.8 Property income attributed to insurance policy holders***

Property income attributed (as income) to insurance policy holders has been calculated since 1998 on the basis of the insurance survey. It is described in Section 5.16. In the case of Finland, the item has not appeared earlier. In Finland property income attributed to insurance policy holders is calculated on the rest-of-the-world account only for life insurance, because the number of other primary insurance policies acquired by foreigners in Finland is small, in 2000 insurance premiums from them amounted to EUR 23 million and in 2001 to EUR 34 million.

## 8.9 Rents on land and on sub-soil assets

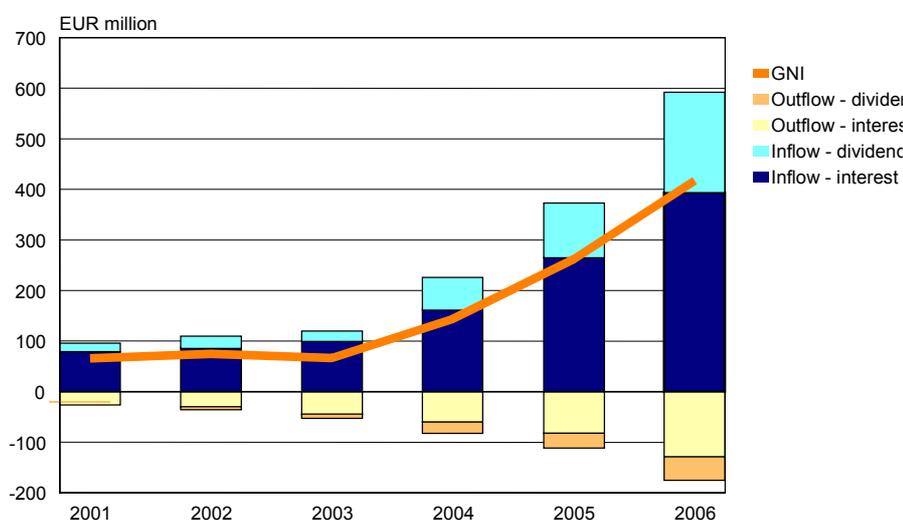
Separate statistics are not compiled for this item in Finland. Instead, it is included in interest. The item is probably negligible.

## 8.10 Income of mutual funds (UCI)

In order to comply with the rules of ESA95 Statistics Finland has changed the method of recording non-distributed income of mutual funds (UCIs). According to the ESA95 property income earned by mutual funds must be entered as income of its shareholders irrespective of whether it is distributed among them as share of profits or re-invested on their behalf. The procedure equals the situation where even capitalised property income is paid to the shareholders who then immediately re-invest it in the fund. The interest of these funds is entered as interest (D.41) and the dividends as dividends (D.421).

Up to now, property income of mutual funds has been treated in National Accounts in accordance with national business book-keeping conventions, i.e. the amount of entered property income has equalled that of distributed profits. An exception to this is dividend income from domestic funds, which is already largely treated according to the principles of ESA95.

### Revision's impact on GNI by component



As recently as in the early 2000s, the phenomenon was still of minor significance, as the volume of investments in mutual funds was relatively low. However, investments in both domestic and foreign funds have grown rapidly, especially by employment pension funds, insurance corporations and households. In consequence, an increasingly significant property income item has been missing from National Accounts, which is why a decision has now been taken to revise the time series to bring them in line with ESA95.

## Chapter 9 FISIM: Calculation, Allocation and Impact on GNI

FISIM (Financial Intermediation Services Indirectly Measured) refer to those services produced by financial corporations from which no direct fee is charged. FISIM is divided into user sectors, in which case intermediate consumption in each industry grows in direct relation to the use of financial intermediation services indirectly measured. FISIM included in interests on households' consumer credits and in interests on households' bank deposits are allocated to households' consumption expenditure, or final consumption. The Regulation of the EU concerning the allocation of FISIM in national accounts<sup>7</sup> defines FISIM as interest margins on loans and deposits.

The value of FISIM is calculated by using a reference rate that is the average rate of loans and deposits between FISIM producers, or credit institutions. The reference rate is applied to sector-specific interest flow and stock data that are obtained from credit institutions. Inside sectors FISIM is divided to the user industries on the basis of the total output of the industry. An external reference rate is used in calculating FISIM exports and imports, which is the average rate of loans and deposits between domestic and foreign credit institutions. The central bank does not produce FISIM but its output is calculated through costs.

**Table 58. Key items in the production account of financial intermediation, 2004.**

Output total	3720
- Market output	1530
- Output for own final use	70
- FISIM	2120

In the past, FISIM have not influenced GDP in national accounts, because they have been entered as intermediate consumption of the sector undivided. Now, FISIM will be divided between the user sectors, whereby the intermediate consumption of each sector/activity will go up by the amount of these services it uses. The FISIM included in the interests of households' consumer credits and bank deposits will be allocated to households' consumption expenditure, i.e. final consumption. Because a portion of the FISIM is now recorded under final consumption instead of intermediate consumption, GDP will grow.

FISIM allocated to general government (S13) and non profit institutions serving households (S15) increase both intermediate consumption and output of the sectors and non-market final consumption expenditures as well.

<sup>7</sup> Council Regulation (EC) No 448/98

Exports and imports are also recorded under FISIM, which means that imports for intermediate consumption lower GDP while exports raise it. All in all, gross domestic product will grow by the difference between final consumption (consumption expenditure + exports) and imports for intermediate consumption. Gross national income will only go up by the amount of domestic final consumption (consumption expenditure), because interests paid to and received from the rest of the world are adjusted in FISIM by the amounts of imports and exports.

**Example 1: Supply and use of FISIM in 2004 at current prices, EUR million (figures as July, 2010)**

<b>Domestic output</b>	
S12 Financial corporations	2,148
Intermediate consumption	1,653
S11 Non-financial corporations	770
S12 Financial corporations	7
S13 General government	121
S14 Households	725
S15 Non-profit inst. serving households	30
of which final consumption of NPISHs and general government	148
Final consumption	849
Private consumption:	
S14 Households	701
S13 General government	121
S15 NPISH	27
Exports	
S2 Rest of the world	22
Imports	
S2 Rest of the world	228
Effect on GDP: Final Consumption + exports - imports	849+22-228=643
	(0.2% of GDP)

The value of FISIM is calculated using a reference interest rate which is the mean interest rate of producers of FISIM, or loans and deposits between credit institutions. The reference interest rate is applied to the data on interest flows and stocks by sector which are obtained from credit institutions. Within sectors, FISIM are divided among user industries pro rata to their total output. The exports and imports of FISIM are calculated using an external reference interest rate, which is the mean interest rate of loans and deposits between domestic and foreign credit institutions.

The allocation of FISIM also influences sector account interests (D41). The interest received from user sectors (D41R) grows, because the FISIM of deposits are added to the interest on deposits. The interest paid by user sectors (D41K) diminish by the amount of the FISIM of loans. Thus, the use of FISIM, in other words loan and deposits margins, move from the sector accounts' property income and expenditure to intermediate or final consumption, where the use of all other services is also shown in national accounts.

In the producer sectors of FISIM, i.e. S.122 and S.123, the impact on interests is reversed, that is, received interests diminish and paid interests grow. The revision makes the interests of sector accounts into theoretical ones complying with the reference interest rate stock and "cleaned" of FISIM. The actual interests received and paid are shown as notes to sector accounts, detached from the accounting system.

In the sector rest of the world (S2) exports and imports go up when FISIM are added to them. In addition, exports of FISIM from deposits (FISIM of deposits made by customers from the rest of the world into domestic credit institutions) are added to and imports of FISIM relating to loans (FISIM of loans taken by domestic customers from foreign credit institutions) are subtracted from received interests. Imports of FISIM from deposits (FISIM of deposits made by domestic customers into foreign credit institutions) are added to and exports of FISIM relating to loans (FISIM of loans taken by foreign customers from domestic credit institutions) are subtracted from paid interests.

Initially, the revision are only applied to data concerning years from 1995 onwards.

The allocation of FISIM for years 1995 - 2001 was done on the same basis as in the previous example. Because GNP should not have any effect, the FISIM in GDP and in property income from/to ROW were added up and to the transition item was put the same sum. This ensures that GNP remains unchanged. All the items resulting FISIM allocation are in the table R2.

## 2004, The effect of allocation of FISIM

Gross domestic product (ESA 95)	565
+ Compensation of employees received from the rest of the world	0
- Compensation of employees paid to the rest of the world	0
+ Property income received from the rest of the world	165
- Property income paid to the rest of the world	29
Total impact GNI	701

### *FISIM data sources*

#### **Data sources by sectors**

##### **Sector S122**

Supervisory data collection of credit institutions - (Luottolaitosten viranomaistiedonkeruu (VIRATI))

- Profit and loss account - interest flows
- Balance sheet - stocks of loans and deposits

ECB statistics on interest rates - (Keskuspankin MFI -korkotiedonkeruu)  
- breakdown of the interest rates of loans and deposits by the counterpart sectors

Financial Accounts

- breakdown of the stocks of loans and deposits by counterpart sectors

Main data sources of Financial Accounts:

- S11 Non-financial corporations - Structural business statistics
- S12 Financial corporations - Supervisory data collection of credit institutions, Financial Accounts inquiry, State pensions fund, Insurance Supervisory Authority data collection
- S13 General government - Central government bookkeeping accounts, the State Treasury debt report, Local government finans statistics, State pensions fund statistics (TELA)
- S14 Households - Counterpart information
- S15 Non-profit institutions serving households - Financial accounts inquiry

Balance of payments statistics

- data on interests and stocks of deposits and loans for imports of FISIM. Data for exports of FISIM is obtained from 'VIRATI' data collection.

##### **Sector S123**

Financial Accounts

- the stocks of loans and deposits by counterpart sectors
- ECB statistics on interest rates - (Keskuspankin MFI -korkotiedonkeruu)
- interest rates of loans by the counterpart sectors

## Chapter 10 Main classifications

### 10.1 Classifications in the production approach

#### 10.1.1 Classification of sectors

The classification of sectors is the basic classification form in the production approach. It is also used in the income approach (Section 10.2.).

In the sector classification, the column on the left reflects the ESA 2000 (ESA95) code, the following column the corresponding FNA heading.

ESA95 code	FNA code	Sektoriluokitus (S)	Classification of sectors (S)
S.1	S1	Koko kansantalous (kotimaiset sektorit yhteensä)	Total economy (national sectors total)
	S111	Yritykset <sup>1)</sup>	Non-financial corporations <sup>1)</sup>
S.11	S112	Asuntoyhteisöt	Housing corporations
S.12	S12	Rahoitus- ja vakuutuslaitokset <sup>2)</sup>	Financial and insurance corporations <sup>2)</sup>
S.121	S121	Keskuspankki	The central bank
S.122	S122	Muut rahalaitokset	Other monetary financial institutions
S.123	S123	Muut rahoituksen välitystä harjoittavat laitokset	Other financial intermediaries
S.124	S124	Rahoituksen ja vakuutuksen välitystä avustavat laitokset	Financial auxiliaries
S.125	S125	Vakuutuslaitokset	Insurance corporations
S.13	S13	Julkisyhteisöt	General government
S.1311	S1311	Valtionhallinto	Central government
S.1313	S1313	Paikallishallinto <sup>3)</sup>	Local government <sup>3)</sup>
S.1314	S1314	Sosiaaliturvarahastot	Social security funds
	S13141	Työeläkelaitokset	Employment pension schemes
	S13149	Muut sosiaaliturvarahastot	Other social security funds
S.14	S14	Kotitaloudet <sup>1)</sup>	Households <sup>1)</sup>
S.15	S15	Kotitalouksia palvelevat voittoa tavoittelemattomat yhteisöt	Non-profit institutions serving households
S.2	S2	Ulkomaat <sup>4)</sup>	Rest of the world <sup>4)</sup>
S.21	S21	Euroopan unioni	The European Union
S.211	S211	EU:n jäsenmaat	The Member States of the EU
	S2111	EMU-jäsenmaat	The Member States of the EMU
	S2112	Muut EU:n jäsenmaat	Other Member States of the EU
S.212	S212	EU:n laitokset	The institutions of the EU
S.22	S22	Muut maat ja kansainväliset järjestöt	Other countries and international organisations

#### 10.1.2 Classification of industries

In the output approach, Finland's national accounts are calculated on the basis of establishments by industry (the final figures are calculated by product). The main production classification is that of industries, which follows the NACE classification. The right-hand column of the table below has the FNA 2000 code (FNA = Finland's National Accounts). The column to the left reflects the corresponding Standard Industrial Classification TOL 2002 code, the NACE-based industry classification ratified by Statistics Finland. In the Finnish classification there are exceptions compared with NACE in agriculture, construction and dwellings. Additionally, the difference between GDP calculated using income and that calculated using production (relating to compensation of employees and operating surplus) is

recorded as an unallocated item for each industry. In gross fixed capital formation use is made of industry X (999) "Industry unspecified", in which the asset transfer tax payable on investments is put.

**Luokitukset**

TOL2002 SNA2005 Toimialaluokitus

-

**Classifications**

Standard Industrial Classification

**NACE200 code****2**

	<b>0</b>	<b>Toimialat yhteensä</b>	<b>Industries total</b>
<b>A</b>	<b>A</b>	<b>Maatalous, riistatalous ja metsätalous</b>	<b>Agriculture, hunting and forestry</b>
011...015	01	Maa- ja riistatalous ja niihin liittyvät palvelut	Agriculture, hunting and related service activities
011...014	01MAA	Maatalous ja siihen liittyvät palvelut	Agriculture and related services
0112	0112	Puutarhatalous	Horticulture
0125	0125	Muu kotieläintalous	Other farming of animals
013	013	Yhdistetty kasvinviljely ja kotieläintalous	Growing of crops combined with farming and animals
014	014	Maataloutta palveleva toiminta	Agricultural and animal husbandry service activities, exc. veterinary activ.
015	015	Metsästys ja riistanhoito	Hunting, trapping and game propagation including related service activ.
02	02	Metsätalous ja siihen liittyvät palvelut	Forestry, logging and related service activities
02011	0211	Metsän viljely	Growing of forests
02013	0212	Puunkorjuu	Timber harvesting
02019	0219	Muu metsätalous	Other forestry and logging activities
0202	0202	Metsätaloutta palveleva toiminta	Forestry and logging related service activities
<b>B</b>	<b>B</b>	<b>Kalatalous</b>	<b>Fishing</b>
05	05	Kalastus, kalanviljely ja niihin liittyvät palvelut	Fishing, operation of fish hatcheries and fish farms;
<b>C</b>	<b>C</b>	<b>Mineraalien kaivu</b>	<b>Mining and quarrying</b>
10	10	Energiamineraalien kaivu	Mining and quarrying of energy producing materials
13	13	Metallimalmien louhinta	Mining of metal ores
14	14	Muu mineraalien kaivu	Other mining and quarrying
<b>D</b>	<b>D</b>	<b>Teollisuus</b>	<b>Manufacturing</b>
DA	DA	Elintarvikkeiden, juomien ja tupakan valmistus	Manufacture of food products, beverages and tobacco
15	15	Elintarvikkeiden ja juomien valmistus	Manufacture of food products and beverages
151...158	151	Elintarvikkeiden valmistus	Manufacture of food products
159	159	Juomien valmistus	Manufacture of beverages
16	16	Tupakkatuotteiden valmistus	Manufacture of tobacco products
DB	DB	Tekstiilien ja vaatteiden valmistus	Manufacture of textiles and textile products
17	17	Tekstiilien valmistus	Manufacture of textiles
18	18	Vaatteiden valmistus; turkisten muokkaus	Manufacture of wearing apparel; dressing and dyeing of fur
DC	DC	Nahan ja nahkatuotteiden valmistus	Manufacture of leather and leather products
19	19	Nahan ja nahkatuotteiden valmistus	Manufacture of leather and leather products
DD	DD	Puutavaran ja puutuotteiden valmistus	Manufacture of wood and wood products
20	20	Puutavaran ja puutuotteiden valmistus	Manufacture of wood and wood products
DE	DE	Massan, paperin, paperituotteen valmistus, kustannustoiminta	Manufacture of pulp, paper and paper products, publishing and printing
21	21	Massan, paperin ja paperituotteiden valmistus	Manufacture of pulp, paper and paper products
22	22	Kustantaminen ja painaminen	Publishing and printing
DF	DF	Öljytuotteiden, koksen, ydinpolttoaineen valmistus	Manufacture of refined petroleum products, coke and nuclear fuel
23	23	Öljytuotteiden, koksen, ydinpolttoaineen valmistus	Manufacture of refined petroleum products, coke and nuclear fuel
DG	DG	Kemikaalien ja kemiallisten tuotteiden valmistus	Manufacture of chemicals and chemical products
24	24	Kemikaalien ja kemiallisten tuotteiden valmistus	Manufacture of chemicals and chemical products
DH	DH	Kumi- ja muovituotteiden valmistus	Manufacture of rubber and plastic products
25	25	Kumi- ja muovituotteiden valmistus	Manufacture of rubber and plastic products
251	251	Kumituotteiden valmistus	Manufacture of rubber products
252	252	Muovituotteiden valmistus	Manufacture of plastic products
DI	DI	Ei-metallisten mineraalituotteiden valmistus	Manufacture of other non-metallic mineral products
26	26	Ei-metallisten mineraalituotteiden valmistus	Manufacture of other non-metallic mineral products
DJ	DJ	Metallien jalostus ja metallituotteiden valmistus	Manufacture of basic metals and fabricated metal products
27	27	Metallien jalostus	Manufacture of basic metals
28	28	Metallituotteiden valmistus	Manufacture of fabricated metal products
DK	DK	Koneiden ja laitteiden valmistus	Manufacture of machinery and equipment n.e.c.
29	29	Koneiden ja laitteiden valmistus	Manufacture of machinery and equipment n.e.c.

DL	DL	Sähkötekni- ja optisten laitteiden valmistus	Manufacture of electrical and optical equipment
30	30	Konttori- ja tietokoneiden valmistus	Manufacture of office machinery and computers
31	31	Muu sähkökoneiden ja -laitteiden valmistus	Manufacture of electrical machinery and apparatus n.e.c.
32	32	Radio-, TV- ja tietoliikennevälineiden valmistus	Man. of radio, television and communication equipment and apparatus
33	33	Lääkintä- ja hienomekaanisten tuotteiden valmistus	Manufacture of medical and precision products
DM	DM	Kulkuneuvojen valmistus	Manufacture of transport equipment
34	34	Autojen ja perävaunujen valmistus	Manufacture of motor vehicles, trailers and semi-trailers
35	35	Muu kulkuneuvojen valmistus	Manufacture of other transport equipment
351	351	Laivojen ja veneiden valmistus ja korjaus	Building and repairing of ships and boats
352...355	352	Muu muiden kulkuneuvojen valmistus	Manufacture of other transport equipment n.e.c.
DN	DN	Muu valmistus ja kierrätys	Manufacturing n.e.c. and recycling
36	36	Muu valmistus	Manufacturing n.e.c.
361	361	Huonekalujen valmistus	Manufacture of furniture
362...366	362	Muiden tuotteiden valmistus	Miscellaneous manufacturing n.e.c.
37	37	Kierrätys	Recycling
<b>E</b>	<b>E</b>	<b>Sähkö-, kaasu- ja vesihuolto</b>	<b>Electricity, gas and water supply</b>
40	40	Sähkö-, kaasu- ja lämpöhuolto	Electricity, gas, steam and hot water supply
41	41	Veden puhdistus ja jakelu	Collection, purification and distribution of water
<b>F</b>	<b>F</b>	<b>Rakentaminen</b>	<b>Construction</b>
45	45	Rakentaminen	Construction
	4501	Talonrakentaminen	Building of complete constructions or parts thereof
	4502	Maa- ja vesirakentaminen	Civil engineering
	4509	Rakennuspalvelutoiminta	Construction service activities
<b>G</b>	<b>G</b>	<b>Kauppa; moottoriajoneuv. ja kotitalousesin. korjaus</b>	<b>Trade; repair of motor vehicles and household goods</b>
50	50	Moottoriajoneuvojen kauppa, korjaus ja huolto; huoltamat	Sale, repair and maintenance of motor vehicles; service stations
501,503...505	501	Moottoriajoneuvojen kauppa; huoltamat	Sale of motor vehicles; service stations
502+50403	502	Moottoriajoneuvojen korjaus ja huolto	Repair and maintenance of motor vehicles
51	51	Tukkukauppa ja agentuuritoiminta	Wholesale trade and commission trade
52	52	Vähittäiskauppa; kotitalousesineiden korjaus	Retail trade; repair of household goods
521...526	521	Vähittäiskauppa	Retail trade
527	527	Kotitalousesineiden korjaus	Repair of household goods
<b>H</b>	<b>H</b>	<b>Majoitus- ja ravitsemistoiminta</b>	<b>Hotels and restaurants</b>
55	55	Majoitus- ja ravitsemistoiminta	Hotels and restaurants
551+552	551	Majoitustoiminta	Hotels
553...555	553	Ravitsemistoiminta	Restaurants
<b>I</b>	<b>I</b>	<b>Kuljetus, varastointi ja tietoliikenne</b>	<b>Transport, storage and communication</b>
60...63	IA	Kuljetus ja varastointi	Transport and storage
60	60	Maaliikenne; putkijohtokuljetus	Land transport; transport via pipelines
601	601	Rautatieliikenne	Transport via railways
602	602	Muu maaliikenne	Other land transport
6021+6023	6021	Linja-auto-, raitiotie- ja metroliikenne	Bus, motor-coach, tram and underground train transport
6022	6022	Taksiliikenne	Taxi operation
6024	6024	Tieliikenteen tavarankuljetus	Freight transport by road
603	603	Putkijohtokuljetus	Transport via pipelines
61	61	Vesiliikenne	Water transport
62	62	Ilmaliikenne	Air transport
63	63	Liikennettä palveleva toiminta; matkatoimistot	Supporting and auxiliary transport activities; activities of travel agencies
	6301	Radanpito	Railway development
	6302	Tienpito	Road development
6323	6303	Ilmaliikennettä palveleva toiminta	Supporting air transport activities
	6309	Muu liikennettä palveleva toiminta	Other supporting transport activities
64	IB	Posti- ja teleliikenne	Post and telecommunications
64	64	Posti- ja teleliikenne	Post and telecommunications
641	641	Posti- ja kuriiritoiminta	Post and courier activities
642	642	Teleliikenne	Telecommunications
<b>J</b>	<b>J</b>	<b>Rahoitus- ja vakuutustoiminta</b>	<b>Financial intermediation and insurance</b>
65	65	Rahoitustoiminta	Financial intermediation
66	66	Vakuutustoiminta	Insurance
67	67	Rahoitusta ja vakuutusta palveleva toiminta	Activities auxiliary to financial intermediation and insurance

<b>K</b>	<b>K</b>	<b>Kiinteistö-, vuokraus- ja tutkimuspalv., liike-elämän palv.</b>	<b>Real estate, renting, research and business activities</b>
70	KA	Kiinteistöalan palvelut	Real estate activities
70	70	Kiinteistöalan palvelut	Real estate activities
701	701	Kiinteistöjen rakennuttaminen ja kauppa	Real estate activities with own property
702	702	Asuntojen ja kiinteistöjen vuokraus ja hallinta	Letting and operation of property
70201+70202	7021	Asuntojen omistus ja vuokraus	Letting and operation of dwellings
70209	7022	Kiinteistöjen vuokraus ja hallinta	Letting and operation of real estate
703	703	Kiinteistöjen välitys, isännöinti ja hoito	Real estate activities on a fee or contract basis
7031	7031	Kiinteistövälitys	Real estate agencies
7032	7032	Isännöinti ja kiinteistönhoito	Management of real estate on a fee or contract basis
71...74	KB	Liike-elämää palveleva toiminta; vuokraus- ja tutkimuspalv.	Business activities; renting and research activities
71	71	Kulkuneuvojen, koneiden ja laitteiden vuokraus	Renting of machinery and equipment
72	72	Tietojenkäsittelypalvelu	Computer and related activities
73	73	Tutkimus ja kehittäminen	Research and development
74	74	Muu liike-elämää palveleva toiminta	Other business activities
741	741	Lainopillinen ja taloudellinen konsultointi; hallintayhtiöt	Legal and financial consultancy; holdings
742+743	742	Tekninen palvelu; testaus ja analysointi	Technical activities; testing and analysis
744	744	Mainospalvelu	Advertising
747	747	Siivous	Industrial cleaning
745+746+748	748	Muut palvelut liike-elämälle	Miscellaneous business activities n.e.c.
<b>L</b>	<b>L</b>	<b>Hallinto, pakollinen sosiaalivakuutus</b>	<b>Administration, compulsory social security</b>
75	75	Hallinto, pakollinen sosiaalivakuutus	Administration, compulsory social security
	751	Julkinen hallinto	Public administration
	752	Maanpuolustuskalusto ja varusmiehet	Defence equipment and conscripts
753	753	Pakollinen sosiaalivakuutustoiminta	Compulsory social security activities
	7531	Työeläkevakuutus	Employment pension insurance
	7539	Muu pakollinen sosiaalivakuutus	Other compulsory social security
<b>M</b>	<b>M</b>	<b>Koulutus</b>	<b>Education</b>
80	80	Koulutus	Education
<b>N</b>	<b>N</b>	<b>Terveydenhuolto- ja sosiaalipalvelut</b>	<b>Health and social work</b>
85	85	Terveydenhuolto- ja sosiaalipalvelut	Health and social work
851	851	Terveydenhuoltopalvelut	Human health activities
852	852	Eläinlääkintäpalvelut	Veterinary activities
853	853	Sosiaalipalvelut	Social work activities
<b>O</b>	<b>O</b>	<b>Muut yhteiskunnalliset ja henkilökohtaiset palvelut</b>	<b>Other community, social and personal service activities</b>
90	90	Ympäristönhuolto	Sewage and refuse disposal, sanitation and similar activities
91	91	Järjestö- ja uskonnollinen toiminta	Activities of religious and membership organisations
911+912	911	Työnantaja-, ammatti- ja elinkeinoelämän järjestöt	Activities of employers and business organisations, trade unions
913	913	Uskonnolliset ja muut järjestöt	Activities of other membership organisations
9131	9131	Uskonnolliset yhteisöt	Activities of religious organisations
9132+9133	9139	Muut järjestöt	Activities of other membership organisations n.e.c.
92	92	Virkistys-, kulttuuri- ja urheilutoiminta	Recreational, cultural and sporting activities
93	93	Muut palvelut	Other service activities
9301	9301	Pesulatoiminta	Washing and drycleaning of textile and fur products
9302...9305	9309	Muut henkilöpalvelut	Other personal service activities
<b>P</b>	<b>P</b>	<b>Kotitalouspalvelut</b>	<b>Household service activities</b>
95	95	Kotitalouspalvelut	Household service activities
	<b>X</b>	<b>Toimialoitain erittelemätön</b>	<b>Industry unspecified</b>

### 10.1.3 Classification by type of producer

Besides the classification of activities, use is also made of the classification by type of producer based on establishments. The three main types of producers comprise market producers and non-market producers of two kinds: own final use producers and other non-market producers.

SKT-koodi	Tuottajatyypiluokitus (T) 5)	Classification of producers by type 5)
T1	Markkinatuottajat	Market producers
T2	Omaan loppukäyttöön tuottajat	Producers for own final use
T3	Muut markkinattomat tuottajat	Other non-market producers
<b>T0</b>	<b>Tuottajatyypit yhteensä</b>	<b>Types of producers total</b>

#### 10.1.4. Classification by product

The classification applied to the Finnish national accounts is shown in Appendix 1.

### 10.2 Classifications used in the income approach

The key classification in the income approach is the classification of sectors. It is shown in Section 10.1.1.

### 10.3 Classifications used in the expenditure approach

#### 10.3.1 Individual consumption

The classification of individual consumption used in Finland follows the COICOP classification very closely. In the Finnish classification five digits and durability class codes have been used to separate products. In education and in insurance there is only one group in the Finnish classification, compared with the COICOP breakdown according to level of education and type of insurance. In rents one group has been used in each case for both actual and imputed rents. Otherwise the differences are insignificant.

Yksilöllisen kulutuksen luokitus käyttötarkoituksen mukaan (COICOP) SKT-kulutuksenimikkeistö	Classification of individual consumption by purpose – COICOP SNA consumption nomenclature
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C01	ELINTARVIKKEET JA ALKOHOLITTOMAT JUOMAT	FOOD AND NON-ALCOHOLIC BEVERAGES
<b>C011</b>	<b>Elintarvikkeet</b>	<b>Food</b>
C0111	Leipä- ja viljatuotteet	Bread and other grain products
C01111ND	Riisi	Rice
C01112ND	Jauhot ja suurimot	Flour and groats
C01113ND	Perunajauhot	Potato flour
C01114ND	Ruokaleipä	Bread
C01115ND	Kahvileipä	Cakes and pastries
C01116ND	Muut viljatuotteet	Other grain products
C0112	Liha ja lihatuotteet	Meat and meat products
C01121ND	Naudanliha	Beef
C01122ND	Sianliha	Pork
C01123ND	Siipikarjan liha	Poultry
C01124ND	Lammas, poro ym.	Mutton, reindeer meat, etc.

C01125ND	Riistan liha	Game
C01126ND	Makkara	Sausages
C01127ND	Lihäsäilykkeet, -einekset ja -valmisteet	Tinned meat, processed and precooked meat
C01128ND	Muut lihatuotteet	Other meat products
C0113	Kala ja kalatuotteet	Fish and fish products
C01131ND	Tuore kala	Fresh fish
C01132ND	Kalasäilykkeet ja -valmisteet	Fish preserves and precooked fish products
C0114	Maito, juusto ja munat	Milk, cheese and eggs
C01141ND	Tinkimaito ja tuottajan kulutus	Milk sold directly to consumers and consumption for own use
C01142ND	Maito ja maitojauhe	Milk and milk powder
C01143ND	Hapanmaitotuotteet	Sour milk products
C01144ND	Kerma	Cream
C01145ND	Juustot	Cheeses
C01146ND	Munat	Eggs
C0115	Rasvat ja öljyt	Oils and fats
C01151ND	Voi ja voi-kasviöljyseokset	Butter and butter-vegetable oil mixtures
C01152ND	Margariini	Margarine
C01153ND	Muut rasvat ja öljyt	Other fats and oils
C0116	Hedelmät	Fruit
C01161ND	Tuottajan hedelmät ja puutarhamarjat	Fruit and garden berries for own use
C01162ND	Tuoreet hedelmät ja puutarhamarjat	Fresh fruit and garden berries
C01163ND	Metsämarjat	Forest berries
C01164ND	Kuivatut hedelmät, pähkinät yms.	Dried fruit, nuts, etc.
C01165ND	Hedelmä- ja marjasäilykkeet ja -valmisteet	Fruit and berry preserves and preparations
C0117	Kasvikset	Vegetables
C01171ND	Sienet	Mushrooms
C01172ND	Tuottajan vihannekset ja juurekset	Vegetables and root crops for own use
C01173ND	Tuoreet vihannekset ja juurekset	Fresh vegetables and root crops
C01174ND	Vihannes- ja juuresvalmisteet	Vegetable and root crop preparations
C01175ND	Tuottajan perunat	Potatoes for own use
C01176ND	Perunat	Potatoes
C01177ND	Perunavalmisteet	Potato preparations
C0118	Sokeri, hillot, hunaja, siirapit, suklaa ja makeiset	Sugar, jams, honey, syrups, chocolate and confectionery
C01181ND	Sokeri	Sugar
C01182ND	Hunaja	Honey
C01183ND	Hillot, siirappi ym.	Jams, syrup, etc.
C01184ND	Makeiset ja suklaa	Confectionery and chocolate
C01185ND	Jäätelö	Ice cream
C0119	Muualla luokittelemattomat elintarvikkeet	Food n.e.c.
C01190ND	01.1.9.1 Mausteet, ravintoainevalmisteet, erittelemätön kulutus	Spices, nutrient preparations, unspecified expenditure
C012	<b>01.2 Alkoholittomat juomat</b>	<b>Non-alcoholic beverages</b>
C0121	Kahvi, tee ja kaakao	Coffee, tea and cocoa
C01211ND	Kahvi	Coffee
C01212ND	Tee	Tea
C01213ND	Kaakao	Cocoa
C0122	Kivennäisvedet, virvoitusjuomat ja mehut	Mineral waters, soft drinks and juices
C01221ND	Kivennäisvedet ja virvoitusjuomat	Mineral waters and soft drinks
C01222ND	Mehut	Juices
<b>C02</b>	<b>ALKOHOLIJUOMAT, TUPAKKA JA</b>	<b>ALCOHOLIC BEVERAGES, TOBACCO AND</b>

<b>C021</b>	<b>HUUMEET</b>	<b>NARCOTICS</b>
C0211	<b>02.1 Alkoholijuomat</b>	<b>Alcoholic beverages</b>
C02110ND	Väkevät alkoholijuomat	Spirits
C0212	Väkevät alkoholijuomat	Spirits
C02120ND	Viini, siideri, long drinkit	Wine, cider, long drinks
C0213	Viini, siideri, long drinkit	Wine, cider, long drinks
C02130ND	Olut	Beer
<b>C022</b>	<b>Tupakka</b>	Beer
C0220	Tupakka	<b>Tobacco</b>
C02200ND	Tupakka	Tobacco
<b>C023</b>	<b>Huumeet</b>	<b>Narcotics</b>
C0230	Huumeet	Narcotics
C02300ND	Huumeet	Narcotics
<b>C03</b>	<b>VAATETUS JA JALKINEET</b>	<b>CLOTHING AND FOOTWEAR</b>
<b>C031</b>	<b>Vaatetus</b>	<b>Clothing</b>
C0311	Kankaat	Fabrics
C03110SD	Kankaat	Fabrics
C0312	Vaatteet	Garments
C03121SD	Päälyysvaatteet	Outdoor clothing
C03122SD	Alusvaatteet	Underwear
C0313	Asusteet ja pukineet	Accessories and articles of clothing
C03131SD	Lanka ym.	Yarn, etc.
C03132SD	Hatut, solmiot, liinat, käsineet ym.	Hats, ties, scarves, gloves, etc.
C0314	Vaatteiden korjaus ja vuokraus	Garment repair and hire
C03140S	Vaatteiden korjaus ja vuokraus	Garment repair and hire
C032	<b>Jalkineet</b>	<b>Footwear</b>
C0321	Jalkineet ja jalkinetarvikkeet	Footwear and footwear supplies
C03210SD	Jalkineet ja jalkinetarvikkeet	Footwear and footwear supplies
C0322	Jalkineiden korjaus ja vuokraus	Footwear repair and hire
C03220S	Jalkineiden korjaus ja vuokraus	Footwear repair and hire
<b>C04</b>	<b>ASUMINEN, VESI, SÄHKÖ, KAASU JA MUUT POLTTOAINEET</b>	<b>HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS</b>
<b>C041</b>	<b>Todelliset asumisvuokrat</b>	<b>Actual rents for housing</b>
C0410	Todelliset asumisvuokrat	Actual rents for housing
C04100S	Todelliset asumisvuokrat	Actual rents for housing
<b>C042</b>	<b>Laskennalliset asumisvuokrat</b>	<b>Imputed rents for housing</b>
C0420	Laskennalliset asumisvuokrat	Imputed rents for housing
C04200S	Laskennalliset asumisvuokrat	Imputed rents for housing
<b>C043</b>	<b>Asunnon ylläpito ja korjaus</b>	<b>Maintenance and repair of dwelling</b>
C0431	Asunnon huoltoon ja korjaukseen liittyvät tuotteet	Materials for maintenance and repair of dwelling
C04310ND	Asunnon huoltoon ja korjaukseen liittyvät tuotteet	Materials for maintenance and repair of dwelling
C0432	Asunnon huoltoon ja korjaukseen liittyvät palvelut	Services for maintenance and repair of dwelling
C04320S	Asunnon huoltoon ja korjaukseen liittyvät palvelut	Services for maintenance and repair of dwelling
<b>C044</b>	<b>Muut asumiseen liittyvät palvelut</b>	<b>Other services relating to housing</b>
C0441	Vesi	Water supply
C04410ND	Vesi	Water supply
C0442	Jätteiden keruu	Waste collection
C04420S	Jätteiden keruu	Waste collection
C0443	Jätevesi	Sewage services
C04430S	Jätevesi	Sewage services
C0444	Muut asumiseen liittyvät palvelut	Other services relating to housing n.e.c.
C04440S	Muut asumiseen liittyvät palvelut	Other services relating to housing n.e.c.

<b>C045</b>	<b>Sähkö, kaasu ja muut polttoaineet</b>	<b>Electricity, gas and other fuels</b>
C0451	Sähkö	Electricity
C04510ND	Sähkö	Electricity
C0452	Kaasu	Gas
C04520ND	Kaasu	Gas
C0453	Nestemäiset polttoaineet	Liquid fuels
C04530ND	Nestemäiset polttoaineet	Liquid fuels
C0454	Kiinteät polttoaineet	Solid fuels
C04540ND	Kiinteät polttoaineet	Solid fuels
C0455	Kuuma vesi, höyry ja jää	Hot water, steam and ice
C04550ND	Kuuma vesi, höyry ja jää	Hot water, steam and ice
<b>C05</b>	<b>SISUSTUS, KOTITALOUSVÄLINEISTÖ JA TAVANOMAINEN KODINHOITO</b>	<b>FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE</b>
<b>C051</b>	<b>Huonekalut, sisusteet, matot ja muut lattiapäällysteet</b>	<b>Furniture, furnishings, carpets and other floor coverings</b>
C0511	Huonekalut ja sisusteet	Furniture and furnishings
C05111D	Huonekalut ja kalusteet	Furniture
C05112D	Puutarha- ym. ulkokalusteet	Garden and other outdoor furniture
C05113D	Valaisimet ja varjostimet	Lamps and shades
C05114D	Taide-esineet	Art objects
C05115D	Koriste- ja sisustusesineet, peilit	Decorations, mirrors
C0512	Matot ja muut lattiapäällysteet	Carpets and other floor coverings
C05120D	Matot ja muut lattiapäällysteet	Carpets and other floor coverings
C0513	Huonekalujen ym. korjaus	Repair of furniture, etc.
C05130S	Huonekalujen ym. korjaus	Repair of furniture, etc.
<b>C052</b>	<b>Kotitaloustekstiilit</b>	<b>Household textiles</b>
C0521	Kotitaloustekstiilit	Household textiles
C05211SD	Tekstiilit	Textiles
C05212SD	Patjat	Mattresses
C05213S	Kotitaloustekstiilien korjaus	Repair of textiles
<b>C053</b>	<b>Kodinkoneet</b>	<b>Household appliances</b>
C0531	Suurehkot kodinkoneet	Major household appliances
C05311D	Uunit, kamiinat, kiukaat	Ovens, stoves, sauna stoves
C05312D	Jää- ja pakastekaapit	Refrigerators and freezers
C05313D	Pesukoneet, astianpesukoneet, kuivausrummut	Washing machines, dishwashers, tumble dryers
C05314D	Ompelukoneet	Sewing machines
C05315D	Sähköliedet, mikroaaltouunit, pölynimurit	Electric cookers, microwave ovens, vacuum cleaners
C0532	Pienet sähkökäyttöiset kodinkoneet	Small electric household appliances
C05320SD	Pienet sähkökäyttöiset kodinkoneet	Small electric household appliances
C0533	Kodinkoneiden korjaus	Repair of household appliances
C05330S	Kodinkoneiden korjaus	Repair of household appliances
<b>C054</b>	<b>Lasiesineet, ruokailuvälineet ja kotitalouden käyttöesineet</b>	<b>Glassware, tableware and household utensils</b>
C0541	Lasiesineet, ruokailuvälineet ja kotitalouden käyttöesineet	Glassware, tableware and household utensils
C05411SD	Ruokailuastiat, ruoanvalmistus- ym. astiat	Dishes, cooking dishes, etc.
C05412SD	Ruokailu- ja ruoanvalmistusvälineet	Table cutlery and cooking utensils
C05413SD	Muu kotitalousvälineistö	Other household articles
C05414S	Kotitalousvälineiden korjaus	Repair of household articles
<b>C055</b>	<b>Työkalut ja laitteet kodin- ja puutarhanhoitoon</b>	<b>Tools and equipment for house and garden</b>
C0551	Puutarhakoneet, muut työkoneet	Garden appliances, other work appliances
C05510D	Puutarhakoneet, muut työkoneet	Garden appliances, other work appliances

C0552	Pientyökalut ja tarvikkeet	Tools and miscellaneous accessories
C05521SD	Kotitalouden käyttöesineet ja työkalut	Household utensils and tools
C05522SD	Pienet sähkötarvikkeet	Small electric accessories
<b>C056</b>	<b>Tavarat ja palvelut tavanomaiseen kodinhoitoon</b>	<b>Goods and services for routine household maintenance</b>
C0561	Kotitalouden lyhytikäiset kulutustavarat	Non-durable household goods
C05611ND	Pesu-, puhdistus- ym. aineet	Cleaning and washing substances
C05612ND	Hyönteis- ym. myrkyt	Insecticides and other pesticides
C05613ND	Paperiset ja muoviset kertakulutustavarat	Disposable paper and plastic goods
C05614ND	Muut kertakulutustavarat	Other non-durable goods
C0562	Kotitalouspalvelut	Household services
C05620S	Kotitalouspalvelut	Household services
<b>C06</b>	<b>TERVEYS</b>	<b>HEALTH</b>
<b>C061</b>	<b>Lääkintätuotteet, -laitteet ja - välineet</b>	<b>Medical products, appliances and equipment</b>
C0611	Lääkkeet	Medicines
C06110ND	Lääkkeet	Medicines
C0612	Muut farmaseuttiset tuotteet	Other pharmaceutical products
C06120ND	Muut farmaseuttiset tuotteet	Other pharmaceutical products
C0613	Terapeuttiset laitteet ja välineet	Therapeutic appliances and equipment
C06131D	Silmä- ja piilolasit, proteesit, kuulokojeet	Glasses, contact lenses, prostheses, hearing aids
C06132D	Muut terapeuttiset laitteet ja välineet	Other therapeutic appliances and equipment
<b>C062</b>	<b>Avohoitopalvelut</b>	<b>Non-hospital medical and paramedical services</b>
C0621	Lääkäripalvelut	Medical services
C06210S	Lääkäripalvelut	Medical services
C0622	Hammaslääkäripalvelut	Dental services
C06220S	Hammaslääkäripalvelut	Dental services
C0623	Muut avohoitopalvelut	Paramedical services
C06230S	Muut avohoitopalvelut	Paramedical services
<b>C063</b>	<b>Sairaalapalvelut</b>	<b>Hospital services</b>
C0630	Sairaalapalvelut	Hospital services
C06300S	Sairaalapalvelut	Hospital services
<b>C07</b>	<b>KULJETUS</b>	<b>TRANSPORT</b>
<b>C071</b>	<b>Kulkuvälineiden hankinnat</b>	<b>Purchase of vehicles</b>
C0711	Autot	Motor cars
C07110D	Autot	Motor cars
C0712	Moottoripyörät ja –kelkat	Motorcycles and snowmobiles
C07120D	Moottoripyörät ja –kelkat	Motorcycles and snowmobiles
C0713	Polkupyörät	Bicycles
C07130D	Polkupyörät	Bicycles
C072	<b>Yksityisten kulkuvälineiden käyttö</b>	<b>Operation of personal transport equipment</b>
C0721	Varaosat ja lisävarusteet	Spare parts and accessories for personal transport equipment
C07211SD	Renkaat	Tyres
C07212SD	Muut varaosat ja lisävarusteet	Other spare parts and accessories
C0722	Poltto- ja voiteluaineet	Fuels and lubricants
C07220ND	Poltto- ja voiteluaineet	Fuels and lubricants
C0723	Yksityisten kulkuvälineiden huolto ja korjaus	Maintenance and repair of personal transport equipment
C07230S	Yksityisten kulkuvälineiden huolto ja korjaus	Maintenance and repair of personal transport equipment
C0724	Muut yksityisiin kulkuvälineisiin liittyvät palvelut	Other services for personal transport equipment

C07241S	Autonvuokraus	Car rentals
C07242S	Autopaikka-, pysäköinti- ja tienhoitomaksut	Parking place, parking and road maintenance charges
C07243S	Ajo-opetus	Driving lessons
C07244S	Katsastus-, kuljettajantutkinto- ja kilpimaksut	Motor vehicle inspection, driving test and number plate charges
C073	<b>Kuljetuspalvelut</b>	<b>Transports services</b>
C0731	Juna-, raitiovaunu- ja metromatkat	Train, tram and underground train travel
C07310S	Juna-, raitiovaunu- ja metromatkat	Train, tram and underground train travel
C0732	Linja-auto- ja taksimatkat	Bus, motor-coach and taxi travel
C07320S	Linja-auto- ja taksimatkat	Bus, motor-coach and taxi travel
C0733	Lentomatkat	Air travel
C07330S	Lentomatkat	Air travel
C0734	Laivamatkat	Sea travel
C07340S	Laivamatkat	Sea travel
C0735	Muut kuljetuspalvelut	Other transport services
C07350S	Muut kuljetuspalvelut	Other transport services
<b>C08</b>	<b>TIETOLIIKENNE</b>	<b>TELECOMMUNICATIONS</b>
<b>C081</b>	<b>Tietoliikenne</b>	<b>Telecommunications</b>
C0811	Postipalvelut	Postal services
C08110S	Postipalvelut	Postal services
C0812	Tietoliikennelaitteet	Telecommunication equipment
C08120D	Tietoliikennelaitteet	Telecommunication equipment
C0813	Tietoliikennepalvelut	Telecommunication services
C08130S	Tietoliikennepalvelut	Telecommunication services
<b>C09</b>	<b>VIRKISTYS JA KULTTUURI</b>	<b>RECREATION AND CULTURE</b>
<b>C091</b>	<b>Audiovisuaaliset, valokuvaus- ja tietojenkäsittelylaitteet</b>	<b>Audio-visual, photographic and data processing equipment</b>
C0911	Äänen ja kuvan vastaanotto-, tallentamis- ja toistolaitteet	Equipment for reception, recording and reproduction sound and images
C09111D	Radiot, äänentoistolaitteet yms.	Radios, sound reproduction equipment, etc.
C09112D	Televisiot ja videonauhurit	Televisions and video recorders
C09113SD	Viihde-elektroniikan osat ja tarvikkeet	Parts and accessories of entertainment electronics
C0912	Valokuvaus-, elokuva- ja optiset laitteet	Photographic and cinematographic equipment and optical instruments
C09121D	Kamerat, kiikarit ym.	Cameras, binoculars, etc.
C09122D	Videokamerat	Videocameras
C0913	Mikrotietokoneet, lasku- ja kirjoituskoneet	Personal computers, calculators and typewriters
C09130D	Mikrotietokoneet, lasku- ja kirjoituskoneet	Personal computers, calculators and typewriters
C0914	Äänen ja kuvan tallennusvälineet	Sound and picture recording equipment
C09141SD	Filmit ja muut valokuvaustarvikkeet	Films and other photographic accessories
C09142SD	Äänilevyt, audio- ja videokasetit	Records, audio and video cassettes
C0915	Audiovisuaalisten, valokuvaus- ja tietojenkäsittelylaitteiden korjaukset	Repair of audio-visual, photographic and data processing equipment
C09150S	Audiovisuaalisten, valokuvaus- ja tietojenkäsittelylaitteiden korjaukset	Repair of audio-visual, photographic and data processing equipment
<b>C092</b>	<b>Muut suurehkot kestopulustustavarat virkistykseen ja kulttuuriin</b>	<b>Other major consumer durables for recreation and culture</b>
C0921	Suurehkot kestopulustustavarat ulkoiluun	Major consumer durables for outdoor recreation
C09210D	Suurehkot kestopulustustavarat ulkoiluun	Major consumer durables for outdoor recreation
C0922	Suurehkot ajanviete- ja	Major durables for indoor recreation

C09220D	virkestystavarat sisäkäyttöön Suurehkot ajanviete- ja virkestystavarat sisäkäyttöön	Major durables for indoor recreation
C0923	Muiden suurehkojen ajanvietevälineiden ylläpito ja korjaus	Maintenance and repair of other major durables for recreation and culture
C09230S	Muiden suurehkojen ajanvietevälineiden ylläpito ja korjaus	Maintenance and repair of other major durables for recreation and culture
<b>C093</b>	<b>Muut tavarat ja laitteet virkestykseen; puutarhatarvikkeet ja lemmikkieläimet</b>	<b>Other recreational items and equipment, garden supplies and pets</b>
C0931	Pelit, lelut ja harrastusvälineet	Games, toys and hobby equipment
C09310SD	Pelit, lelut ja harrastusvälineet	Games, toys and hobby equipment
C0932	Urheilu- ja retkeilyvälineet	Sports and camping equipment
C09320SD	Urheilu- ja retkeilyvälineet	Sports and camping equipment
C0933	Kukat ja puutarhatarvikkeet	Flowers and garden supplies
C09330ND	Kukat ja puutarhatarvikkeet	Flowers and garden supplies
C0934	Lemmikkieläimet ja tarvikkeet	Pets and related products
C09341ND	Lemmikkieläinten ruoka	Pet food
C09342SD	Lemmikkieläimet ja niiden varusteet	Pets and pet supplies
C0935	Lemmikkieläinten lääkintä- ja muut palvelut	Veterinary and other services for pets
C09350S	Lemmikkieläinten lääkintä- ja muut palvelut	Veterinary and other services for pets
<b>C094</b>	<b>Virkestys- ja kulttuuripalvelut</b>	<b>Recreational and cultural services</b>
C0941	Urheilu- ja virkestyspalvelut	Sports and recreational services
C09411S	Urheilu- ja vapaa-ajanvälineiden vuokraus	Sports and leisure-time equipment rentals
C09412S	Muut urheilu- ja virkestyspalvelut	Other sports and recreational services
C0942	Kulttuuripalvelut	Cultural services
C09421S	Televisioiden, videoiden ym. vuokraus	Rentals of television, video, etc.
C09422S	Tv-lupamaksut, kaapeli-tv- ym. maksut	Television licences, cable television fees, etc.
C09423S	Valokuvaamo- ja valokuvien kehityspalvelut	Photographer's services and film development services
C09424S	Muut kulttuuripalvelut	Other cultural services
C0943	Veikkaus, arpajaiset, lotto	Football pools, lottery
C09430S	Veikkaus, arpajaiset, lotto	Football pools, lottery
<b>C095</b>	<b>Sanomalehdet, kirjat ja paperitarvikkeet</b>	<b>Newspapers, books and stationery</b>
C0951	Kirjat	Books
C09510SD	Kirjat	Books
C0952	Sanoma- ja aikakauslehdet	Newspapers and periodicals
C09520ND	Sanoma- ja aikakauslehdet	Newspapers and periodicals
C0953	Kartat, kalenterit, kortit yms. painotuotteet	Maps, calendars, cards and other printed matter, etc.
C09530ND	Kartat, kalenterit, kortit yms. painotuotteet	Maps, calendars, cards and other printed matter, etc.
C0954	Paperitarvikkeet	Stationery
C09540ND	Paperitarvikkeet	Stationery
<b>C096</b>	<b>Valmismatkat</b>	<b>Package tours</b>
C0960	Valmismatkat	Package tours
C09600S	Valmismatkat	Package tours
<b>C10</b>	<b>KOULUTUS</b>	<b>EDUCATION</b>
<b>C100</b>	<b>Koulutus</b>	<b>Educational services</b>
C1000	Koulutus	Educational services
C10000S	Koulutus	Educational services
<b>C11</b>	<b>RAVINTOLAT JA HOTELLIT</b>	<b>HOTELS, CAFES AND RESTAURANTS</b>

<b>C111</b>	<b>Ravitsemispalvelut</b>	<b>Catering services</b>
C1111	Ravintolat ja kahvilat	Restaurants and cafes
C11110S	Ravintolat ja kahvilat	Restaurants and cafes
C1112	Ruokalat	Canteens
C11120S	Ruokalat	Canteens
<b>C112</b>	<b>Majoituspalvelut</b>	<b>Accommodation services</b>
C1120	Majoituspalvelut	Accommodation services
C11200S	Majoituspalvelut	Accommodation services
<b>C12</b>	<b>SEKALAISET TAVARAT JA PALVELUT</b>	<b>MISCELLANEOUS GOODS AND SERVICES</b>
<b>C121</b>	<b>Henkilökohtaisen puhtauden ja kauneuden hoito</b>	<b>Personal hygiene and beauty care</b>
C1211	Kampaamo-, parturi- ym. henkilökohtaiset puhtauspalvelut	Hairdresser, barber and other personal hygiene services
C12110S	Kampaamo-, parturi- ym. henkilökohtaiset puhtauspalvelut	Hairdresser, barber and other personal hygiene services
C1212	Hiustenkuivaajat, sähköparranajokoneet ym. sähkölaitteet	Hairdryers, electric shavers and other electric appliances in kind
C12120D	Hiustenkuivaajat, sähköparranajokoneet ym. sähkölaitteet	Hairdryers, electric shavers and other electric appliances in kind
C1213	Muut henkilökohtaisen puhtauden tavarat	Other appliances, articles and products for personal care
C12131ND	Kosmeettiset ja toalettilmisteet	Cosmetic and toilet articles
C12132ND	WC-paperi, nenäliinat yms.	Toilet paper, handkerchiefs, etc.
C12133ND	Vauvanvaipat, terveyssiteet, vanu	Nappies, sanitary towels, cotton wool
C12134SD	Kammat, hiusharjat, parranajovälineet, hammasharjat	Combs, hair brushes, shaving supplies, tooth brushes
<b>C122</b>	<b>Prostituutio</b>	<b>Prostitution</b>
C1220	Prostituutio	Prostitution
C12200S	Prostituutio	Prostitution
<b>C123</b>	<b>Muulla luokittelemattomat henkilökohtaiset tavarat</b>	<b>Personal effects n.e.c.</b>
C1231	Koruesineet ja kellot	Jewellery, clocks and watches
C12311D	Koruesineet	Jewellery
C12312D	Ranne- ja taskukellot, seinä- ym. kellot	Wrist and pocket watches, wall and other clocks
C12313S	Kellojen ja koruesineiden korjaus	Repair of watches, clocks and jewellery
C1232	Muut henkilökohtaiset tavarat	Other personal effects
C12321SD	Laukut, lompakot	Bags and wallets
C12322SD	Lastenvaunut ja –rattaat, turvaistuimet	Prams, pushchairs and child safety seats
C12323SD	Sateenvarjot, aurinkolasit, tupak.välineet	Umbrellas, sunglasses, smoking articles
<b>C124</b>	<b>Sosiaaliturva</b>	<b>Social protection</b>
C1240	Päivähoito-, laitos- ym. sos.palv.maksut	Children's day care, institution and other social service expenses
C12400S	Päivähoito-, laitos- ym. sosiaalipalvelumaksut	Children's day care, institution and other social service expenses
<b>C125</b>	<b>Vakuutus</b>	<b>Insurance</b>
C1250	Vakuutus	Insurance
C12500S	Vakuutus	Insurance
<b>C126</b>	<b>Rahoituspalvelut</b>	<b>Financial services n.e.c.</b>
C1261	Todelliset rahoituspalvelut	Actual financial services
C12610S	Todelliset rahoituspalvelut	Actual financial services
C1262	Välilliset rahoituspalvelut	FISIM
C12620S	Välilliset rahoituspalvelut	FISIM

<b>C127</b>	<b>Muut muualla luokittelemattomat palvelut</b>	<b>Other services n.e.c.</b>
C1270	Muut muualla luokittelemattomat palvelut	Other services n.e.c.
C12700S	Muut muualla luokittelemattomat palvelut	Other services n.e.c.
<b>P311Y</b>	<b>KOTITALOUKSIEN KULUTUSMENOT SUOMESSA</b>	<b>CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND</b>
<b>KES(D)</b>	<b>KESTOKULUTUSTAVARAT</b>	<b>DURABLE GOODS</b>
<b>PUO(SD)</b>	<b>PUOLIKESTÄVÄT KULUTUSTAVARAT</b>	<b>SEMI-DURABLE GOODS</b>
<b>LYH(ND)</b>	<b>LYHYTIKÄISET TAVARAT</b>	<b>NON-DURABLE GOODS</b>
<b>PAL(S)</b>	<b>PALVELUT</b>	<b>SERVICES</b>
<b>TUR</b>	<b>TURISMIMENOT</b>	<b>EXPENDITURE ON TOURISM</b>
<b>P312Y</b>	<b>Suomalaisten kotitalouksien kulutusmenot ulkomailla</b>	<b>Consumption expenditure of resident households in the rest of the world</b>
<b>P313Y</b>	<b>Ulkomaalaisten kulutusmenot Suomessa</b>	<b>Consumption expenditure of non-resident households in Finland</b>
<b>P31Y</b>	<b>SUOMALAISTEN KOTITALOUKSIEN KULUTUSMENOT</b>	<b>CONSUMPTION EXPENDITURE OF RESIDENT HOUSEHOLDS</b>
<b>P32Y</b>	<b>Voittoa tavoittelemattomien yhteisöjen kulutusmenot</b>	<b>Consumption expenditure of non-profit institutions</b>
<b>YSU</b>	<b>YKSITYISET KULUTUSMENOT SUOMESSA</b>	<b>PRIVATE CONSUMPTION EXPENDITURE IN FINLAND</b>
<b>P3Y</b>	<b>YKSITYISET KULUTUSMENOT</b>	<b>PRIVATE CONSUMPTION EXPENDITURE</b>
	<b>13. KOTITALOUKSIA PALVELEVIEN VOITTOA TAVOITTELEMATTOMIEN YHTEISÖJEN YKSILÖLLISET KULUTUSMENOT</b>	<b>INDIVIDUAL CONSUMPTION EXPENDITURE BY NON PROFIT INSTITUTIONS SERVING HOUSEHOLDS</b>
	<b>14. JULKISYHTEISÖJEN YKSILÖLLISET KULUTUSMENOT</b>	<b>INDIVIDUAL CONSUMPTION EXPENDITURE BY GENERAL GOVERNMENT</b>
	<b>14.1 Asuminen</b>	<b>Housing</b>
	<b>14.2 Terveys</b>	<b>Health</b>
	<b>14.3 Virkistys ja kulttuuri</b>	<b>Recreation and Culture</b>
	<b>14.4 Koulutus</b>	<b>Education</b>
	<b>14.5 Sosiaaliturva</b>	<b>Social security</b>

### 10.3.2 Gross fixed capital formation and changes in inventories

A comparison has been made with the ESA95AN assets classification. In changes inventories there are a number of national subdivisions, which are explained at the relevant points. The P53 items are not calculated in Finnish national accounts.

FNA capital formation category	ESA95 assets classification code	ESA95: Assets classification heading / Notes on differences
<b>P51 Gross fixed-capital formation</b>		
P511 Gross formation of tangible fixed assets	AN.11	Fixed assets

P5111S Dwellings	AN.1111	Dwellings
P5112S Other buildings and structures	AN.1112	Other buildings and structures
P51121S Non residential buildings	AN.11121	Non-residential buildings
P51122S Civil engineering and other structures	AN.11122	Other structures
P5113S Machinery, equipment and transport equipment	AN.1113	Machinery and equipment
P51131S Transport equipment	AN.11131	Transport equipment
P51132S Other machinery and equipment	AN.11132	Other machinery and equipment
P5114S Cultivated assets	AN.1114	Cultivated assets
P51141S Livestock for breeding, dairy, draught etc.	AN.11141	Livestock for breeding, dairy, draught etc.
P51142S Vineyards and orchards	AN.11142	Vineyards, orchards and other plantations of trees yielding repeat products
P512Gross formation of intangible fixed assets	AN.112	Intangible fixed assets
P5121S Mineral exploration	AN.1121	Mineral exploration
P5122S Computer software	AN.1122	Computer software
P5123S Entertainment, literary or artistic originals	AN.1123	Entertainment, literary or artistic originals
P5129S Other intangible fixed assets	AN.1129	Other intangible fixed assets (No figures)
P513 Increase in value of land and non-produced assets		
P5131 Major improvements to land etc.		(ESA point 3.106) (AN 211, partial match)
P5132 Costs of ownership transfer for land etc.		(ESA point 3.111)
<b>P52 Change in inventories</b>	AN.12	Inventories
P521S Materials and supplies	AN.121	Materials and supplies
P5211S Fuels		(Breakdown of heading P521S)
P5219S Other materials and supplies		(Breakdown of heading P521S)
P522S Work in progress	AN.122	Work in progress
P5221S Work in progress on cultivated assets	AN.1221	Work in progress on cultivated assets
P5222S Work in progress on buildings		(Not recorded, in practice purchaser is always known)
P5223S Work in progress on machinery and equipment		(Not declared, because of the small number of production units)
P5229S Other work in progress	AN.1222	Other work in progress (incl. heading P5223S)
P523S Finished goods	AN.123	Finished goods
P524S Goods for resale	AN.124	Goods for resale
P53 Net acquisitions of valuables	AN.13	Valuables
P531S Precious metals and stones	AN.131	Precious metals and stones
P532S Antiques and other art objects	AN.132	Antiques and other art objects
P539S Other valuables	AN.139	Other valuables

### 10.3.3 Foreign trade

#### Trade in goods

A goods nomenclature for both domestic and foreign trade in accordance with the Combined Nomenclature (CN) is used as the basic goods classification in foreign trade statistics. The CN classification covers the first eight digits of Finland's working tariff nomenclature (TARIC).

In addition to the CN, use is made in foreign trade statistics of the SITC (Standard International Trade Classification, Revision 3), together with the classification of industries and the classification of goods by use.

*Balance of payments, services*

The classification for the balance of payments on current account follows the IMF balance-of-payments classification as applied to Finland. The list shows all the headings in the 1998 version, without repetitions (generally revenue, expenditure, net). It should be noted that the Finnish national accounts do not include data for all headings. The classification was amended in 1999.

Balance of payments on current account, net  
 goods, services and remuneration of factors of production  
 goods and services  
 trade balance, Board of Customs  
 revenue, trade in goods, exports, FOB, incl. repairs  
 revenue, trade in goods, repairs, classified repairs  
 revenue, trade in goods, repairs, scheduled repairs  
 expenditure, trade in goods, imports, CIF, Board of Customs, excl. gold  
 expenditure, goods, freight charges on imports (= fob goods imports)  
 expenditure, goods, processing in Finland  
 goods, processing  
 goods, processing abroad  
 goods, processing in Finland  
 goods, repair  
 goods, purchases for means of transport  
 goods, purchases for means of transport, fuel for ships  
 goods, purchases for means of transport, aircraft fuel  
 goods, purchases for means of transport, other port costs  
 goods, non-monetary gold  
 goods, non-monetary gold, gold held as a store of value  
 goods, non-monetary gold, other non-monetary gold  
 services  
 services, transport  
 services, transport, passenger transport  
 services, transport, freight  
 services, transport, other transport  
 services, transport, sea transport  
 services, transport, passenger transport by sea  
 services, transport, freight transport by sea  
 revenue, services, transport, freight charges on foreign traffic,  
 expenditure, services, transport, freight on bulk imports (domestic)  
 expenditure, goods, freight charges on imports (= fob goods imports)  
 services, transport, auxiliary activities for sea transport  
 revenue, services, transport, revenue from ship repairs  
 expenditure, services, transport, port costs  
 services, transport, air transport  
 services, transport, passenger transport by air  
 services, transport, freight transport by air  
 services, transport, auxiliary activities for air transport  
 revenue, services, transport, auxiliary activities for air transport  
 expenditure, services, transport, purchases of passenger services (Finnair)  
 services, transport, other transport  
 services, transport, other carriage of passengers  
 services, transport, other freight transport  
 services, transport, auxiliary activities for other transport  
 services, transport, space transport  
 services, transport, rail transport  
 services, transport, passenger transport by rail  
 services, transport, freight transport by rail  
 services, transport, auxiliary activities for rail transport

services, transport, road transport  
 services, transport, passenger transport by road  
 services, transport, freight transport by road  
 services, transport, auxiliary activities for road transport  
 services, transport, transport by inland waterway  
 services, transport, passenger transport by inland waterway  
 services, transport, freight transport by inland waterway  
 services, transport, auxiliary activities for inland waterway transport  
 services, transport, pipeline transport  
 services, transport, auxiliary activities for other transport  
 services, tourism  
 services, tourism, business and conference tourism  
 services, tourism, consumption by seasonal and frontier workers  
 services, tourism, other business and conference tourism  
 services, tourism, holiday trips  
 services, tourism, health-related tourism  
 services, tourism, education-related tourism  
 services, tourism, other leisure travel  
 other services  
 services, post and telecommunications  
 services, postal services  
 services, telecommunications services  
 services, construction  
 services, construction abroad  
 services, construction in Finland  
 services, insurance services  
 services, insurance services, life insurance and pension funding  
 services, insurance services, freight insurance  
 services, insurance services, other direct insurance  
 expenditure, services, insurance services, other direct insurance  
 services, insurance services, reinsurance  
 expenditure, services, insurance services, reinsurance  
 services, insurance services, other auxiliary activities for insurance  
 services, financial services  
 services, data-processing services  
 services, data-processing services, computer services  
 services, data-processing services, data services  
 services, royalties and licence fees  
 services, other business services  
 services, intermediate trade and other trade-related services  
 services, intermediate trade  
 services, other trade-related services  
 services, operational leasing services  
 expenditure, services, operational leasing services  
 services, miscellaneous business, professional and technical services  
 services, legal, accounting, management and PR services  
 services, legal services  
 services, accounting, auditing, bookkeeping and tax consultancy services  
 services, business and management consultancy, PR services  
 services, market research and opinion polls  
 services, research and development services  
 services, architectural, engineering and other technical consultancy  
 services, agricultural, mining and other processing  
 services, waste treatment and purification  
 services, other agricultural, mining and other processing  
 services, other miscellaneous business, professional and technical services  
 services, inter-branch services  
 services, recreational, cultural and leisure services  
 services, recreational, audio-visual and related activities

services, other personal, cultural and leisure services  
 services, public-sector services  
 services, services of general government, embassies  
 services, services of general government, military units  
 services, other services of general government  
 factor income  
 factor income, earned income from abroad  
 factor income, investment income  
 factor income, investment income from direct investments  
 factor income, investment income, return on equity  
 factor income, investment income, dividends  
 factor income, investment income, reinvested profits  
 factor income, investment income, interest on direct investments  
 factor income, investment income from securities  
 factor income, investment income, dividends  
 factor income, investment income, dividends, Central Bank  
 factor income, investment income, dividends, general government  
 factor income, investment income, dividends, banks  
 factor income, investment income, dividends, other sectors  
 factor income, investment income, interest on securities  
 factor income, investment income, interest on corporate bonds  
 factor income, investment income, interest on corporate bonds, Central Bank  
 factor income, investment income, interest on corporate bonds, general government  
 factor income, investment income, interest on corporate bonds, banks  
 factor income, investment income, interest on corporate bonds, other sectors  
 factor income, investment income, interest on money-market instruments and derivatives  
 factor income, investment income, interest on money-market instruments and derivatives, Central Bank  
 factor income, investment income, interest on money-market instruments and derivatives, general government  
 factor income, investment income, interest on money-market instruments and derivatives, banks  
 factor income, investment income, interest on money-market instruments and derivatives, other sectors  
 factor income, investment income, other investment income  
 factor income, investment income, other investment income, Central Bank  
 factor income, investment income, other investment income, general government  
 factor income, investment income, other investment income, banks  
 factor income, investment income, other investment income, other sectors  
 current transfers  
 current transfers, public-sector current transfers  
 current transfers, other (private) current transfers  
 current transfers, other (private) current transfers, workers  
 current transfers, other private current transfers, other  
 balance of payments on capital and financial account  
 balance of payments on capital account  
 capital transfers  
 capital transfers, public-sector capital transfers  
 capital transfers, waiving of claims, public sector  
 capital transfers, other public-sector capital transfers  
 capital transfers, other sectors' capital transfers  
 capital transfers, migrant workers' capital transfers  
 capital transfers, waiving of claims, other sectors  
 capital transfers, other sectors' other capital transfers  
 capital transfers, non-financial non-produced assets

## ***10.4 Classifications used in the transition from GDP to GNI***

See the classification above and Chapter 8.

## Chapter 11 Main data sources

### 11.1 Statistical surveys and other data sources used for the production approach

#### 11.1.1 Commodity statistics

Manufacturing's commodity statistics cover manufacturing production data and the use data of raw materials. Additionally, foreign trade data of services are collected from enterprises of manufacturing, construction and service industries.

##### *Collection of manufacturing production and raw materials data*

Commodity data are gathered from manufacturing production and the use of materials and equipment. The data are gathered each year by establishment from enterprises employing more than 10 persons, which allows the checking of commodities by industry. Production data have been gathered in accordance with the EU commodity classification Prodcom since 1997. The Prodcom regulation defines the compiling of statistics applying to the Community's manufacturing production. There are roughly 6 000 headings.

**Production:** Information on the value and quantity of all goods made and sold by establishments outside the enterprise in a given calendar year is requested. The aggregate production and estimated value and quantities of separately defined products intended for sale are also requested.

**Raw materials:** Information is requested on the value and quantity of all key raw materials, semi-finished goods, additives and equipment by individual heading purchased for manufacturing and used by establishments in a given calendar year. Additionally, information is requested on the aggregate use (not value) of separately defined materials and equipment. The classification used is the CPA classification adapted for this purpose.

#### 11.1.2 Business Register

Finland's Business Register covers all enterprises, self-employed persons and non-profit corporations in the capacity of employers, recorded to the Value Added Tax (VAT) Payment Register or the PAYE Register (pay-as-you-earn/Employee's Advance Tax Declaration Register). The register does not include farms. A total of 342 000 legally constituted units (enterprises) and 372 000 operational establishments belonged to the register in 1999. Central and local administrative units are on a separate database. They number roughly 37 900.

##### *Statistical unit*

In the production approach of Finland's national accounts, the statistical unit is the establishment, not the enterprise or other institutional unit. An establishment is a production unit belonging to an individual non-financial corporation or quasi-corporation, situated in a single place and mainly

producing one type of goods or services. The establishment is equivalent to the local kind-of-activity unit (KAU), as defined in ESA 95.

<i>Name of data source:</i> Business Register
<i>Organisation collecting the data and purposes for which it is collected:</i> <b>Statistics Finland / Business Trends /Business Register. The data collected are used to maintain a statistical Business Register. The Business Register serves as a sample frame, as information service material and a source of business statistics.</b>
<i>Reporting units:</i> <b>Enterprises (legally constituted units) including employers, recorded to VAT or PAYE register. In addition to the use of direct surveys, use is made of information gathered by the tax administration, the Bank of Finland and the National Board of Customs.</b>
<i>Periodicity:</i> <b>Annual, additions of new units from the National Board of Taxation every quarter.</b>
<i>Variables collected:</i> <b>The key variables collected are turnover, employees, self-employed persons, industry, location of activity.</b>
<i>Methods used to allow for missing data:</i> <b>Full-time working years for employees are defined by a regression equation from tax administration data containing employer–employee links and wages and salaries paid. Full-time working years for self-employed are determined using Finnish Centre for Pensions data concerning self-employed pension contributors.</b>
<i>Adjustments made for conceptual differences from national accounts concepts:</i> <b>Reviews applying to classifications of units by sector, for example enterprises with zero turnover.</b>
<i>Further adjustments made to the data:</i> <b>None</b>

### 11.1.3 Structural business statistics

#### *Combined business data*

The basic materials for calculating the national accounts are the combined data applying to enterprises and covering the Business Register, the business tax register and direct survey data. A combination of these three data sources produces an exhaustive file in which, by combining the data, erroneous data can be dependably adjusted and what is omitted estimated. The material has been in use since the mid-1990s and has improved the dependability of national accounts figures.

#### *Data content*

The aggregate data contain exhaustive data about nearly all enterprises in every industry. The statistical unit is the independent enterprise. The material does not cover group companies or establishments. New forms of central government and local authority bodies are included. General

government agencies and non-profit bodies are not included in its scope. The identifying code is the tax identification number of the enterprise. These data are collected annually.

The material contains profit and loss statements and balance sheet data, income and expenditure separation data, balance sheet separation data, fixed assets separation data, number of staff, wages and salaries and social security costs. In addition, the material contains basic data and classification data of enterprises, which are to be found in Statistics Finland's Business Register.

Some of the data are collected directly from enterprises or by utilising the data in the tax administration's business tax register and Statistics Finland's Business Register. All the big companies are within the scope of direct data collection (minimum of 50, 20 or 10 staff, depending on the industry). Data on smaller enterprises are produced on the basis of administrative data and data in the Business Register. Classification data on businesses are collected as a rule from Statistics Finland's Business Register.

### *Classifications*

SIC 2000 Classification by industry, classification by size depending on the number of staff, classification by institutional sector, legal classification, type of owner and area.

#### *Business tax register, contents*

The business tax register (EVR) contains profit and loss data, balance sheets and data about the fixed capital assets of all enterprises liable to business tax. The tax authorities collect data on forms. Data are keyed in the tax office and sent in electronic form to Statistics Finland. Data on any given tax year are available for the use of Statistics Finland use in September of the following year. Since the data are manually recorded by the tax office, errors or omissions may occur. In order for the data to be used for compiling statistics or for invoiced services, business tax data must be processed at Statistics Finland. This occurs mechanically as a rule but to some extent recourse must be had to manual corrections as well. The Business Structures department at Statistics Finland is responsible for further processing and review of the data.

#### *Testing and correcting business tax register data*

Only existing figures are used in testing and correcting the data and no recourse is had to external calculations or estimates. This also tends to ensure that corrected calculations are authentic and that they correspond closely to the real situation.

#### *Business tax register, imputation of omitted or erroneous data*

Imputed corresponding values for profit and loss and balance sheet data rejected in business tax data are calculated. Use is made of the Business Register and turnover data in arriving at imputed figures and they are compared with the 4-digit industry level and the size of the enterprise in question, for whose average structure profit and loss and/or balance sheet data are imputed. Data imputed to an enterprise will correspond to the

average structure of similarly sized enterprises in the same industry at the level determined by the turnover of the enterprise. The data of an enterprise are not imputed if turnover is small (the limit is set each year), or if there is no control group of comparable size in the industry.

### ***Combining Business Tax Register data with direct survey data***

The data obtained through a direct survey are added to business tax register data so that the latter data are deleted if the same data already exist in the direct survey. The business tax register variables are standardised to conform to the variables in the direct survey. Adding the direct survey data improves the quality and increases the number of imputed enterprises.

### ***Business tax register and correction of over- and undercoverage***

The business tax register data contains the business tax data of all enterprises, irrespective of whether they have merged with another enterprise in the course of the tax year. If an enterprise which has merged or been taken over is part of a direct survey, data on the enterprise may be duplicated in the file. In order to correct over- or undercoverage, merged enterprises are deleted from the file.

Undercoverage occurs when data on enterprises are not accessible from the business tax register, through direct survey or by imputation. Data for the biggest missing enterprises must be retrieved either from financial statement publications or from the National Board of Patents and Registration of Finland (PRH).

### ***Coverage of combined aggregate data***

The combined enterprise data from structural business statistics are quite exhaustive with respect to the business sector and much of the household sector. The usefulness of the sector for financial and insurance institutions is reduced by the concept of turnover being misconstrued. The material contains (almost) no public enterprises. Only a fraction of non-profit institutes are included.

### ***Structural business statistics, establishments***

The data cover the Mining and quarrying C, Manufacturing D, Electricity, gas and water supply E, and Construction F industries.

The material contains data about the number of staff in establishments, hours worked, wages and salaries, social security contributions, profit and loss statements including operating profits, a breakdown of income and expenditure, current assets, increases and decreases in the expenditure of tangible assets, imports and exports, and gross value and processed value of production. In addition, the material contains classification data related to the location and operation of establishments. The identifying code is the identification number of the establishment.

The data are collected using survey forms. They cover every manufacturing and construction business and establishment with a staff of 20 persons or more. Also included are some enterprises, the extent of whose operations is equivalent to that of enterprises with staffs of 20 persons or more, and a

sample number of construction enterprises with staffs of less than 20 persons.

Data on establishments not in the direct survey, or about which data have not been received, are entered in the data base using tax administration and Business Register data. Part of the data on such units is imputed.

<i>Name of survey:</i> <b>Structural business statistics (survey of annual accounts)</b>
<i>Link to the surveys undertaken at the European level:</i> <b>Structural business statistics</b>
<i>Reporting units:</i> <b>Enterprise (legal unit)</b>
<i>Periodicity:</i> <b>Annual</b>
<i>Time of availability of results:</i> <b>12-15 months</b>
<i>Sampling frame:</i> <b>Business Register</b>
<i>Survey compulsory or voluntary:</i> <b>Compulsory</b>
<i>Main features of survey methodology:</i> <b>All enterprises with staffs of 20 or more (in some industries the limit is 10, in others 50) within the scope of the direct survey). Data on small enterprises (or those not responding) are to be found in tax administration business tax register data. Variables in the tax data are fewer. Imputation method based on regression equation is used to estimate omitted data.</b>
<i>Population size:</i> <b>Roughly 220 000 (Industries C – O; excluding J, L)</b>
<i>Sample size:</i> <b>Number in direct survey approx. 8 500</b>
<i>Survey response rate:</i> <b>85% on average</b>
<i>Methods used to impute for missing data:</i> <b>Cf. above</b>
<i>Variable used for grossing-up to the population:</i> <b>Results of direct survey not raised to basic population level. Instead, administrative data and other data are combined.</b>
<i>Sample coverage as a percentage in terms of variable used for grossing-up:</i> <b>Cf. Preceding panel</b>
<i>Main variables collected:</i> <b>Profit and loss statement and balance sheets; turnover by industry; breakdown of profit and expenditure; breakdown of balance sheet; breakdown of fixed assets; data applying to staff; imports and exports</b>
<i>Adjustments made for conceptual differences from national accounts:</i> <b>Adaptations entailed by economic transactions in the national accounts, e.g. relating to semi-finished products</b>
<i>Further adjustments made to the data:</i> <b>None</b>

#### 11.1.4 Payment control data

Data consisting of value-added tax collected monthly by the tax authorities and payment notifications applying to employer transactions are obtained for the purpose of national accounts calculations. The declaration responsibility rests on employers paying regular wages and salaries or subject to monthly monitoring of value-added taxes. Employers paying wages and salaries on an irregular basis and producers of primary production in the annual value-added tax procedure do not submit such notifications.

The following value-added tax data are entered in the control declaration:

- taxes on domestic sales broken down according to tax rates
- Community sales (sales of goods to EU countries) and Community acquisitions

- Tax to be paid on Community acquisitions
- Tax payable

Employer payments denote:

- Tax withholding on wages, salaries and pensions
- Tax withholding on remuneration for work if the recipient is a natural person, a general partnership, a limited partnership, or other consortium
- Employers' social contributions
- Tax at source levied on wages, salaries and pensions paid in a limited fashion to taxpayers.

### 11.1.5 Labour Force Survey

The Labour Force Survey is an ongoing survey, for which data collection is based on a sample taken twice a year from the central population register. More than 12 000 persons are interviewed monthly by interviewers from Statistics Finland. The sample is altered by degrees and about 130 000 persons are interviewed annually. A total of 98% of interviews are by telephone and the non-response rate in 1999 averaged 14.2%.

Besides the non-response rate, the results of the Labour Force Survey contain a number of other risk factors. The most important of these is random variation due to the sample. Based on reviews, the magnitude of the proportionate mean error was 0.3% of the number employed in 1999. The number employed was estimated with a 95% reliability rate to be between 2 311 000 and 2 281 000 persons in 1999.

Most questions in the Labour Force Survey apply to one week in the survey month. The material is compiled by asking all those interviewed about their activities during the week in question. At the start of 2000, a transfer was made to a continuous week, whereas earlier data were collected for the week in which the 15<sup>th</sup> day of the month occurred. Data collection for the EU Labour Force Survey and the Finnish Labour Force Survey are integrated.

<i>Name of survey:</i> <b>Labour Force Survey</b>
<i>Link to the surveys undertaken at the European level:</i> <b>Based on the recommendations of the International Labour Organisation, adheres to procedures of the EU labour force survey.</b>
<i>Reporting units:</i> <b>Individuals</b>
<i>Periodicity:</i> <b>Continuous, monthly</b>
<i>Time of availability of results:</i> <b>Roughly three weeks from the survey month, annual data roughly one month from the turn of the year</b>
<i>Sampling frame:</i> <b>Population Information System (Register)</b>
<i>Survey compulsory or voluntary:</i> <b>Voluntary</b>
<i>Main features of survey methodology:</i> <b>Divided into sample rotations, gradually altered panel survey, computer-assisted, mainly telephone interviews (98%)</b>
<i>Population size:</i> <b>Resident population aged 15–74 years (including those aged 14 years on the sample date)</b>
<i>Sample size:</i> <b>About 12 000 persons/month, 36 000 persons/quarter</b>
<i>Survey response rate:</i> <b>84–86% (net)</b>
<i>Methods used to impute missing data:</i> <b>Non-response is compensated by use of post-stratification, missing working hours replaced by mean values of corresponding type of group (substitution)</b>

<i>Variable used for grossing-up to the population: <b>Number of stratum population/number of responses (Also calibration, or more efficient estimating using job applicant register)</b></i>
<i>Sample coverage as a percentage in terms of variable used for grossing-up: <b>Monthly sample covers 0.3% of basic population, quarterly sample 0.9% and annual sample 3.4%</b></i>
<i>Main variables collected: <b>Labour force, employed, unemployed, occupation, working hours, industry, nature of employment relationship</b></i>
<i>Adjustments made for conceptual differences from national accounts concepts: <b>Conscripts, transition to domestic concept</b></i>
<i>Further adjustments made to the data: <b>None</b></i>

### 11.1.6 Financial Statement and Report data of Central Government

The central government accounting system was reformed, starting on 1 January 1998. The central government accounting office organisation's offices and institutions and its extra-budgetary funds follow the new central government accounting system. The accounting offices are accountable units and also balance their own accounts each year. Financial Statement and Report of Central Government data are compiled in the State Treasury from the accounting data of accounting offices by eliminating internal profits, expenditure, receivables and liabilities.

Accounting by offices and institutions and central accounting by the State Treasury consist of on-budget accounting and budget accounting. The onus in on-budget accounting is to reflect accurately the actions and financial status of the government and its agencies. Budget accounting, on the other hand, is a means of monitoring budget implementation. In addition to on-budget accounting and budget accounting, the accounting office's account code is reported in conjunction with recorded entries. Extra-budgetary fund accounting is only recorded in on-budget accounting.

Accounting is performed mainly on an accrual basis. Accounting transactions based on payments (= cash received) are adjusted in conjunction with balancing the books. Accruals of tax revenues, financial transactions and subsidies are also exceptionally entered on a cash-basis principle in final central government accounts. In accordance with the new accounting system, only on-budget revenue and expenditure items are entered in central government revenue and expenditure. In budget accounting, budget income and expenditure are recorded in accordance with the budget of the year in question. Thus, for example, a transfer of appropriations is a budget transaction but not an on-budget accounting transaction.

As a rule, accounting industries and economic activities are defined automatically using various code keys. Accounting economic activities for all industries are defined by the on-budget accounting chart of accounts. Division into accounting industries is performed by means of main titles, classes and items of budgetary accounting. In the absence of main title-class data, the industry type is concluded on the basis of office codes. Not all necessary determinations of industries and economic activities can be made by code keys. In addition to automatic adaptations of records, adjustments to industries and economic activities are also performed manually.

### 11.1.7 Statistics on the finances and activities of municipalities and joint municipal authorities

<i>Name of data source:</i>	<b>Statistics on the finances and activities of municipalities and joint municipal authorities</b>
<i>Organisation collecting the data:</i>	<b>Statistics Finland, General government finances</b>
<i>Reporting units:</i>	<b>All municipalities (totalling 444 in 2004) and joint municipal authorities (totalling 237 in 2004), aggregate data</b>
<i>Periodicity:</i>	<b>Ongoing annual statistics (survey occurs each year after closing of books)</b>
<i>Variables collected:</i>	<b>Cf. Appendix 1: Data contained in survey form in 1999. Collected variables will change as the functions of municipalities and joint municipal authorities change. These changes are usually annual.</b>
<i>Methods used to allow for missing data:</i>	<b>None, all form data are requested from suppliers of municipal/joint municipal authority accounting statistics at review stage and checked</b>
<i>Adjustments made for conceptual differences from national accounts concepts:</i>	<b>None</b>
<i>- Coverage:</i>	<b>In addition to the public enterprise activities of municipalities and joint municipal authorities, this type of producer counts the Government of Åland (year-end accounts), the Association of Finnish Local and Regional Authorities (year-end accounts) and the Commission for Local Authority Employers (year-end accounts)</b>
<i>- Demarcation due to type of producer:</i>	<b>Municipal/joint municipal authority accounting statistics also include all utility-like activities. Demarcated from general government, utilities are calculated as part of the enterprise sector.</b>
<i>- Classification</i>	<b>a) The main indices of municipal/joint municipal authority accounting statistics, Part II (from which the production account (Table 01) and investments (Table 02) are calculated) are divided into roughly 50 types of municipal/joint municipal authority function. By combining the types of function, industries in the national accounts and</b>

	<b>COFOG functions are obtained. b) The income and expenditure lines of the main indices (Part II: Tables 01 and 02) also amount to considerably more than economic activities in the production account and types of goods in investments. By combining these lines, the economic activities of the production account and types of investment goods are obtained.</b>
<i>- Timing:</i>	<b>Timing adjustment of taxes</b>
<i>- Other data adaptations:</i>	<b>Tax data of municipalities (sector accounts) are taken from data in the monthly settlement system of the tax administration</b>
	<b>Central government transfers to local government (sector accounts) are taken from central government accounting records. Municipalities and joint municipal authorities enter some of these in their sales income and such entries are deducted from the municipal and joint municipal authority sales income from central government. In addition, any central government transfers to local government within the sector are deducted from intermediate consumption and sales income. The final result is that central government transfers to local authorities appear as an uninterrupted money flow in sector accounts without duplicated entries.</b>
	<b>Capital transfers to and from central government are taken from central government accounting records.</b>

### 11.1.8 Price indices

Price indices used in the national accounts are mostly related to volume calculations. To the extent that prices are used in calculating values, descriptions are attached to the descriptions of the relevant industries and products in Chapter 3. In this context, the key indices in general use are given in the form of a list.

#### *Producer price indices*

##### **Producer price indices 2000 = 100**

- \* Producer Price Index for Manufactured Products 2000=100
- \* Export Price Index 2000=100
- \* Import Price Index 2000=100
- \* Basic Price Index for Domestic Supply 2000=100

\* Wholesale Price Index 2000=100

\* Producer Price Index for Services 2005=100

In producer price indices 2000=100, a procedure is used in which weightings and commodity headings can be continually changed under the NACE Rev. 1 Industry classification.

The CN Commodity classification has been adopted for the classification of index commodity headings.

**The Producer Price Index for Manufactured Products 2000=100**

measures developments in producer prices of goods manufactured in Finland and intended for domestic use, i.e. trends in producer prices for domestic market goods. The producer price index for manufactured products 2000=100 covers commodities classified in industries C - E.

**The Export Price Index 2000=100** measures trends in f.o.b. prices (to the exporting country's border) of export goods. Currency denominated export prices are converted to Finnish marks at the average exchange rate for the reference month. The Export Price Index 2000=100 covers commodities classified in industries A – E.

**The Import Price Index 2000=100** measures trends in c.i.f. prices (cost, insurance and freight to the border of the importing country) of imported goods. Import prices denominated in foreign currencies are converted to Finnish markkas at the average exchange rate for the reference month. The Import Price Index 2000=100 covers commodities classified in industries A – E.

**The Basic Price Index for Domestic Supply 2000=100** measures trends in prices of goods for use in Finland as they enter the market. The index includes domestic and imported goods. The price of domestic goods equals the factory price before tax. The price of imported goods equals the imported c.i.f. price + customs duties. The Basic Price Index for Domestic Supply 2000=100 covers commodities classified in industries A – F.

**The Wholesale Price Index 2000=100** measures trends in the purchase price after tax of goods to be used in Finland. The index includes domestic and imported goods. The Wholesale Price Index includes value-added tax and other indirect taxes. The wholesale price of domestic goods equals the factory price + value-added tax and other indirect taxes. The wholesale price of imported goods equals the c.i.f. price + customs duties, value-added tax and other indirect taxes. The Wholesale Price Index 2000=100 covers commodities classified in industries A – E.

**The Producer Price Index for Services 2005=100** measures describes development in the prices of services from the viewpoint of enterprises and the public sector. At the moment, producer price indices are calculated for 24 service industries and indices are published quarterly for 23 industries. The producer price index for services is quarterly and the data are published on the 17th day or the weekday nearest to it of the month following the statistical reference quarter. The current base year for the published indices is 2005=100. Lengths of the times series vary by industry.

### *Price indices of public expenditure*

The price indices of public expenditure the development of prices in the expenditure of central and local governments. These indices are used correspondingly in the national accounts as deflators in calculations of the national product by central government and local authorities. The base year of the index is **2000**.

### *Consumer Price Index*

The Consumer Price Index describes price trends of goods and services purchased by households resident in Finland. The Consumer Price Index is calculated with a method where prices of different commodities are weighted together with their shares of consumption. The calculation of the index follows Laspeyres' price index formula whereby the shares of consumption used as the weights relate to the base period.

Finland's Consumer Price Index is altered regularly, usually at five-year intervals. Statistics Finland investigates various index formula options and the potential for reviewing the weighting structure more often than once every five years. The base year of the index is 2005.

The compilation of the consumer index traditionally follows ILO recommendations. Starting in 1996, Commission regulations on calculating the standardised consumer price index have also indirectly impacted Consumer Price Index calculations.

### *11.1.9 Financial leasing statistics*

Statistics Finland has compiled financial leasing statistics annually since 1985. They contain information about financial leasing by credit institutions and other leasing providers by sector and industry, including real estate leasing and sale-and-lease-back activities. The statistics reveal financial leasing acquisitions and real estate and sale-and-lease-back contracts made during the year as well as leasing rents obtained through financial leasing. The statistics do not include direct leasing.

The data providers are credit institutions offering financial leasing within the terms of the Credit Institution Act and units whose principal industry in the Business Register is financial leasing or other credit granting. The financial leasing statistics contained 24 enterprises practising financial leasing in 2001. In practice, the statistics cover all financial leasing activities in Finland.

### *11.1.10 Insurance and finance statistics*

Annual **Banking Statistics**, produced by Statistics Finland, contain all the data on credit institutions. The level of accuracy in the publication follows the form of officially published financial statements. The statistics show the Profit and Loss Accounts and Balance Sheets in tabular form, additional related data and tables related to annual financial statements.

**Investment fund statistics** prepared annually by Statistics Finland contain the Profit and Loss Account and Balance Sheet data of investment funds registered in Finland and the management companies that control them.

**Insurance statistics** are compiled annually by the Insurance Supervision Authority. The statistics contain approved Profit and Loss Account and Balance Sheet data with appendices for all non-life, life and retirement pension companies, the specifications of non-life insurance companies by class of insurance, and the premium income, claims incurred and insurance portfolio specifications of life and retirement pension companies.

The insurance statistics contain the same aggregate data regarding local mutual insurance associations as they do regarding non-life insurance companies. The statistics do not cover the activities of rest of the world insurance companies in Finland. The statistics do, however, contain figures about insurance business written by Finnish companies in the rest of the world.

## *11.2. Statistical surveys and other data sources used for the income approach*

### *11.2.1 Index of wage and salary earnings*

The Index of Wage and Salary Earnings **2000=100** shows the change in the median earnings of full-time, regular employees by sector, branch of activity and employee group. The index is not influenced by factors such as overtime and holiday related earnings. Taxes are not deducted from earnings.

The Index of Wage and Salary Earnings is calculated on the basis of wage and salary statistics in various sectors each quarter. It is a unit value index after the Laspeyres model, in which employees are classified by employer sector into groups according to industry, and hourly and monthly pay. The group comprises 165 median earnings series which are weighted together on the basis of weightings according to total earnings.

The Index of Wage and Salary Earnings is calculated quarterly and the necessary data regarding average earnings and staff numbers are obtained once or twice a year as a rule. They represent the earnings data of roughly 1.5 million employees. In addition, Statistics Finland uses sample surveys. The industry classification used is SIC 95, which corresponds to the NACE Rev 1 Classification.

The Wage and Salary Earnings employer sectors are four in all: private, central government, municipal and joint municipal authority, and other. The last of these sectors includes non-profit institutions. The central government sector includes only units involved in on-budget activities. Index of Wage and Salary Earnings industries are broken down into employees paid on an hourly or monthly basis, who have a fixed income weighting. Almost all basic series in the Index of Wage and Salary Earnings are also broken down by gender. Gender, however, is not officially a basis for calculating the Index of Wage and Salary Earnings. Instead, the basic series containing both genders are the starting point.

## 11.3. Statistical surveys and other data sources used in the expenditure approach

### 11.3.1 Foreign trade

#### *Commerce*

There are two ways to collect foreign trade data in the European Union. Statistical data on trade between the Union and non-member States (external trade) are obtained by the customs clearance system. Data on trade between Member States (internal trade) are collected using a separate method called the INTRASTAT system.

#### *Intrastat*

In Finland, the customs collects statistical data not only on external trade but also on internal trade. Importers and exporters make monthly declarations of internal trading statistics as necessary to regional customs offices, which receive and check the data and remit them to the National Board of Customs.

#### **Suppliers of information**

Suppliers of information are enterprises and corporations registered for value-added tax purposes engaged in internal trade. Each calendar year, Member States have to define a limit for the compilation of statistics based on the value of annual imports and exports and a relevant list of suppliers of information.

In practice, the duty to declare is defined based on the aggregate value of Community acquisitions and sales, which the purchaser or vendor of the goods declares to the tax authorities monthly.

The National Board of Customs obtains from the tax authorities the aggregate values of such acquisitions and sales each month, which serve as control data in monitoring the duty of an enterprise to declare.

#### **Imports and exports statistics to be compiled**

Imports of goods from Member States to Finland and exports of goods from Finland to Member States are included in statistics declarations. The statistics to be compiled concern both goods manufactured within the European Union and goods which have obtained Community status (T2 Goods), which originate in third countries, are cleared through customs and released into circulation. Any trade that is purely in the nature of a service and which does not involve goods deliveries is not statistically compiled.

Goods delivered indirectly through another Community country must be declared for internal statistical purposes. When goods originating in third countries and cleared through customs for release into circulation in Finland are then dispatched to another Member State so that the import delivery terminates there, the delivery in question must be included in the Intrastat declaration made in Finland.

It is a condition of compiling internal trade statistics that the goods be physically imported to, or exported from, Finland. If, for example, goods are sold from Finland to France but are dispatched from Belgium, the delivery in

question (trilateral trade) is not included in the internal trade statistics declaration to be made in Finland.

### **Goods deliveries to which the Intrastat system is not applied**

In accordance with Commission Regulation (EC) No 840/96 on internal trade, the Intrastat system is not applied to goods:

- subject to inward processing (suspension system) or processing under customs control, or goods manufactured under such arrangements, or to
- goods trading with areas exempt from the internal trade value-added tax system.

Accordingly, exports from the Åland Islands to Member States and imports from Member States to the Åland Islands are also exempt from the Intrastat system. These transactions belong to internal trade statistics but data regarding them are obtained by means of the customs clearance procedure.

### **Period for compiling statistics**

The period for compiling statistics is the calendar month. Statistical data are sent on declaration forms or in machine language not later than the 10<sup>th</sup> working day of the following month.

## *External trade*

Declarations of external trade statistics are based on Commission Regulation No 1172795 (basic Regulation) and Commission Regulation (EC) No 840/96 (implementation Regulation). A *special trading principle* is applied to statistics, in accordance with which statistics on goods from a third country stored in a customs warehouse are not compiled until taken out of the warehouse.

As a rule, all goods imported to, or exported from, a country are included in external trade statistics. From the standpoint of compiling statistics, it is immaterial whether the goods are included in import or export payment transactions or not.

Included in imported statistics are:

- normal imports of goods released for free circulation
- re-imports of goods after outward job processing
- imports of goods for inward job processing or processing under customs control
- releasing goods from a customs warehouse or customs-free area
- unpaid warranty or compensation deliveries or aid consignments
- vessels purchased for and registered in Finland and aircraft purchased for Finland.

Included in export statistics are:

- normal exports of goods, including that of Community status goods of a third country
- re-exports of goods after inward job processing or processing under customs control
- exports of goods for outward job processing
- exports of Community status goods from a customs warehouse or customs-free area
- unpaid warranty or compensation deliveries

- various aid consignments (e.g. exports of development aid)
- second-hand vessels sold abroad and removed from the Finnish register and aircraft sold from Finland.

Basic data about external trade imports are collected in accordance with the 10-digit TARIC heading. The corresponding export data are collected in accordance with the CN Classification (8 digits). Only the 8-digit CN Classification of goods heading is used as the basic classification for nationally published external trade statistics.

External trade import data are collected in the EU in accordance with the twin country system, so that the country of origin and country of destination must be given for all imported goods. The country of origin is considered to be the country in which the goods are produced or manufactured. If the country of origin is unknown or cannot be established, the country of consignment is declared. The country of consignment means the country from which the goods were initially dispatched to Finland, either directly or through another country. The country of consignment is determined by the location of the goods when the trade transaction applying to them occurred.

The country of consignment of an external trade can be a third country or an area exempt from the EU value-added tax system. The country of destination of exports is considered to be the last known country to which the goods were intended to be exported from Finland on the export date either directly or through another country.

The invoiced value of the goods is used as the imported statistical value, or the price actually paid for the goods. Freight and insurance costs to the first crossing point on the Finnish border must be included in the statistical value. Customs tariffs and taxes levied in Finland are not included.

The sales price before tax is used as the exported statistical value of goods. Freight and insurance costs to the export point on the Finnish border must be included in the statistical value.

### **11.3.2 Household Budget Survey**

Statistics Finland's Household Budget Survey produces data on changes in the consumption expenditure of households and on differences in consumption by population group. The survey also studies the housing conditions, indebtedness, possession of durable goods, and income among households. The survey is a sample survey for which data are collected from households with interviews and diaries filled in by them, and from administrative registers.

From 1966 until 1990, the survey was conducted regularly at five-year intervals. From 1994 to 1996 the survey was carried out annually. Since 1996, household budget surveys have been carried out in 1998 and 2001-2002. Data for the next household budget survey will be collected in 2006.

Consumption expenditure is classified according to the national COICO-HBS classification (around 900 headings). The main consumption groups are food, drinks and tobacco, clothing and footwear, housing and energy, domestic furnishings and appliances, health, transport, telecommunications, culture and leisure, education, and hotels, restaurants and cafes.

Statistical data on household consumption expenditure are available by regional divisions (e.g. NUTS 2), size and structure of household, income bracket classifications, and by socio-economic group and age of reference person.

The survey is a sample survey whose survey population in 2001-2002 comprised approximately 5 500 households. The data are collected with interviews, diaries kept by households and from administrative registers. Information is collected with interviews about the household, its ownership of durable goods, housing and indebtedness. After the interview, the households keep a diary about their consumption expenditure for a fortnight. The data on education and income are derived from registers.

The next data collection is due for 2006. The data for the 2006 survey will be completed at the end of 2007.

<i>Name of survey:</i> <b>Household Budget Survey</b>
<i>Link to the surveys undertaken at the European level:</i> <b>Harmonised concepts, definitions and classifications</b>
<i>Reporting units:</i> <b>Households</b>
<i>Periodicity:</i>
<i>Time of availability of results:</i> <b>Less than two years</b>
<i>Sampling frame:</i> <b>Population register data</b>
<i>Survey compulsory or voluntary:</i> <b>Voluntary</b>
<i>Main features of survey methodology:</i> <b>Double stage stratified sampling is used as for the sampling array. In the first stage, a so-called master sample is chosen by simple random selection. In the second stage, the actual samples are chosen from the master sample by apportioning data in accordance with the division of areas.</b>
<i>Population size:</i> <b>Households permanently resident in Finland</b>
<i>Sample size:</i> <b>7 760</b>
<i>Survey response rate:</i> <b>roughly 63.4% in 1998</b>
<i>Methods used to impute for missing data:</i> <b>Efforts are made to eliminate the impact of an unevenly divided non-response by calibrating the weighting coefficients of the original sampling arrays.</b>
<i>Variable used for grossing-up to the population:</i> <b>Structure and number of households</b>
<i>Sample coverage as a percentage in terms of variable used for grossing-up:</i>
<i>Main variables collected:</i> <b>Households' final consumption expenditure by type of product. Data are also collected on total income and expenditure, debts, use of welfare services. Data are classified by area.</b>
<i>Adjustments made for conceptual differences from national accounts concepts:</i> <b>Adaptations are made to households' final consumption expenditure for some product groups, e.g. insurance services.</b>
<i>Further adjustments made to the data:</i>

#### 11.4. Statistical surveys and other data sources used for the transition from GDP to GNI

Chapter 8 includes a description of these sources.

## *Appendix: Major revision 2010*

Statistics Finland revised in January 2010 national accounts time series for the 1975-2008 period. The revisions have been made necessary by new data in the source statistics, changes in the calculation methods and corrections of detected errors.

National accounts for the 2003-2006 period are based on product-specific supply and use tables. The year 2006 is the new benchmark year, which has been studied profoundly.

### *Output, intermediate consumption and value added*

The level of both output and intermediate consumption has been raised by several per cent, at most by EUR 8-9 billion. Gross calculations were introduced in some economic activities while output or intermediate consumption were otherwise raised in some others. Compared to previous data, the level of value added and GDP fell in almost all years, GDP at most by 0.8 per cent (EUR 1.4 billion) in 2006. In other years the changes remained much smaller when expressed in euro.

### *Agriculture and forestry*

Output and intermediate consumption in agriculture have been revised starting from 1975. The coverage of calculations has been improved in horticulture. Fur prices have been reviewed in certain years. Revisions in the data of the source statistics have been taken into account and detected errors have been corrected. Compared to previous data, the level of value added of agriculture rose after 1990, at most by about EUR 200 million.

New data have become available on forestry since the reform of forest taxation in 2006. These data have lowered the output and value added of the economic activity from the past. The level differential has been gradually closed up backwards so that the old level of 1993 has been adhered to.

Forest increment has also been re-estimated starting from the year 1983 on the basis of the Finnish Forest Research Institute's new data. This, in turn, has increased forestry's output and value added in the 1990s and the 2000s. On the demand side it has added to the growth of inventories, which was in fact the most significant revision made to changes of inventories.

All in all, value added of forestry has diminished by hundreds of millions of euros compared to previous data, especially in the 2000s.

### *Construction and building development*

Value added of building construction grew by about 10 per cent compared to previous data, at most by over 15 per cent, or nearly EUR 1 billion.

In the major revision output of building construction grew considerably for three reasons.

In August 2007, the volume index of newbuilding released revised time series starting from 1995. In them the level of output of newbuilding went up notably firstly due to risen cubic metre prices of the model buildings on which calculations are based. Secondly, building development is also now included in the new levels of newbuilding and in the output of building construction. Thirdly, even the revised statistics do not cover all new buildings as around 3-5 per cent of the data on building projects are registered late and thus left out of the statistics.

New levels of newbuilding, inclusive of data received late, have now been used in the accounts and the level differential of 1995 has been adjusted back to the old output level of 1990 to which output of building development has been added retrospectively back to 1975. The 1990-1995 level shift has been partly interpreted as growth of prices and partly as growth of volume.

Output of building development has previously been calculated as a percentage share of the value of building construction. In the new calculations it is based on the turnover of the economic activity and has contracted considerably. Intermediate consumption is also lower than previously, so value added has not really diminished. Output of building development is now circulated through building construction, i.e. it has been added as an equal amount to the output and intermediate consumption of building construction starting from 1975. This did not alter the value added of building construction.

Expenditure of site preparation related to building construction has previously been entered as intermediate consumption, consumption of fixed capital and compensation of employees of building construction. Now it is entered in full under building construction as intermediate consumption purchased from civil engineering. This increases intermediate consumption of building construction, as well as output and intermediate consumption of civil engineering. In civil engineering, the old level of 1995 has been adhered to.

All in all, 2004 value added of building construction grew by about 15 per cent compared to previous data, or more than 800 million euro.

There was no new survey available for renovations 2005. Planning of the renovation survey has only now started and will relate to the year 2010.

**Table: Changes in construction output, intermediate consumption and gross value added, industry F (including civil engineering), million euro, 2004**

		Output	Intermediate consumption	Gross value added
1	New	21879	13666	8213
2	Old	18859	11661	7198

3	Difference 1-2	3020	2005	1015
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## *Trade*

Especially calculations for the 2005-2007 periods have been revised in trade. In the sale of motor vehicles and in other retail trade sales output and intermediate consumption have been increased but the impact on value added is minor. Items not belonging to it were deducted from the output of wholesale trade, which reduced value added of wholesale trade by about EUR 1 billion.

All in all, value added of trade decreases by about EUR 1 billion, or around 6-7 per cent, in 2006-2007 when compared to the previous data. The level differential has been gradually taken backwards so that the old level of 1995 has been adhered to.

## *Transport*

In freight transport by road subcontracting expenditure has been added to intermediate consumption from which it was previously erroneously deducted. In consequence of this value added of the activity falls by over EUR 1 billion at most starting from 2005. Recording of output and intermediate consumption on the gross principle has been introduced in water transport and especially in supporting and auxiliary transport activities, which increases them considerably but the impact on value added is minor. Gross recording has also been used in telecommunications, but at the same time intermediate consumption has been adjusted by adding to it items that were previously missing from it. In consequence of this value added of the activity has fallen by over EUR 1 billion at most starting from 2005. Revisions have also been made to calculations concerning other transport activities but their impacts are not very large.

All in all, value added of transport decreased by around EUR 3 billion, or 20 per cent, in 2006-2007 when compared to the previous figures. All economic activities considered, this is clearly the largest level revision of value added.

The level differential has been carried backwards so that in other land transport, water transport, auxiliary transport activities and telecommunications the old level of 1985 has been adhered to and the level differential of output and intermediate consumption has gradually been adjusted backwards to it from 2005. In the activities of rail transport, transport via pipelines and air transport the old 1995 level has been adhered to.

## *Financial intermediation and insurance*

In the output of financial intermediation activities, output of financial intermediation services indirectly measured was reviewed starting from 1985 because the calculation method concerning exported financial intermediation services indirectly measured has been revised (see section on financial intermediation services indirectly measured).

“Other expenditure” included in the source data has been deducted from intermediate consumption because it is not viewed as fully belonging to intermediate consumption as defined in national accounts. A respective

revision has also been made to the intermediate consumption of insurance activities. The old level of 1995 has been adhered to in financial intermediation activities and the level of 1999 in insurance activities.

### *Real estate activities*

Output (imputed rents) of owner-occupied dwellings has been reduced starting from 1991 mainly due to re-estimated rents of owner-occupied detached houses. Intermediate consumption has been reduced even more because, among other things, the distribution of annual repairs between dwellings and other buildings was reviewed and the waste management of owner-occupied detached houses was moved under private final consumption.

Output (i.e. rents) and intermediate consumption of rental dwellings was revised slightly upwards starting from 1996, because the stock of rental dwellings was estimated to be larger than before.

Rent income of housing corporations and housing companies from business and other premises has been added to the output of the activity of ownership and letting of dwellings starting from 1990. This income was previously not included in the calculations.

All in all, value added of the activity of ownership and letting of dwellings is hundreds of millions of Euros higher than previously.

Output and intermediate consumption of building development have been reduced considerably from 1975 onwards due to a methodological revision. Output of letting of real estate has been increased starting from 1997 and output of real estate activities on a fee or contract basis has been revised slightly downwards starting from 1996. Among the reasons for this are shifts in activity.

### *Other services*

The output and intermediate consumption of other business activities have been increased in the 2000s. Data by establishment, which were not previously available in this format, have been used in calculations concerning this activity. The old level of year 2000 has been adhered to.

Reclaimed amounts of subsistence allowances granted by local government have previously been erroneously treated as market output of social services. Correct treatment deducts them from granted subsistence allowances (social benefits). The error has been corrected starting from 1997.

An estimate for prostitution has been added to other personal service activities starting from 1991.

### *Financial intermediation services indirectly measured (FISIM)*

The calculation method used for financial intermediation services indirectly measured has been revised in compliance with Eurostat's latest guidelines. In exports and imports FISIM between financial corporations have been set at zero. This has altered significantly the exports and imports of financial intermediation services indirectly measured, so that they are no longer

negative in any one year. The methodological revision also affects the output of FISIM because exports are a component in output calculations.

Because of the altered imports, the use of financial intermediation services indirectly measured as an intermediate product in the sector of non-financial corporations also changed. The distribution by activity was revised within the sector of non-financial corporations based on data on e.g. credit stock, in consequence of which intermediate consumption and value added became slightly revised in almost all activities.

## *Exports and imports*

Several revisions were made to the exports and imports of goods. The so-called exchange rate adjustment was discontinued as of 1999 because it had lost its meaning due to the introduction of the euro. Returned goods were added for the years 1995 to 2004 because they had been missing from the figures of the customs.

Imports of vehicles from abroad by private persons have been added to the imports of goods starting from the year 2000. Smuggling (alcohol, tobacco and narcotics) and goods acquired by the transport stock from abroad have been reviewed starting from 1990. Goods transport has been adjusted in respect of motor vehicles in several years, which also affected exports of services. In the new calculations, assembly of motor vehicles in Finland has been treated in demand more consistently than before as goods export.

The customs have conducted a new study about cif and fob in sea freight in 2008. Based on the study the freight and insurance costs relating to the imports of goods were raised starting from 2007, which lowered goods imports, which are valued on fob basis in national accounts. The item was moved mostly to the imports of services according to the shares of non-domestic shipping companies and insurers.

The level of imports of services was raised gradually in 1996-2000 and lowered in 2001. This way the import figures for research and development and other business activities, which had already previously been raised starting from 2000, were retrospectively taken into account. Exports and imports of financial intermediation services indirectly measured (FISIM) also became revised (see section on financial intermediation services indirectly measured).

All in all, the value of exports altered most in 1991, when it fell by around two per cent (because of FISIM) while the value of imports changed most in 1999 when it grew by about three per cent (because of imports of services). The balance for goods and services weakened, at most by good EUR 1 billion in 1999.

## *Consumption expenditure*

New data concerning households' consumption expenditure became available from the 2006 Household Budget Survey. Because the results of the previous Household Budget Survey (2001) have already been taken into consideration earlier, the corrections concerned the years 2002-2006. The corrections were used to determine changes in the consumption of products

over time and to increase the precision of the structure of consumption between product groups.

For example, expenditure on food, furniture and domestic appliances, repair and servicing of motor vehicles, and social services contracted slightly. By contrast, expenditure on medicines, recreation and culture, and restaurants and hotels increased.

Housing expenditure, among other things imputed rents of owner-occupied dwellings, has been revised to comply with the new output calculations for the activity starting from 1991. On the basis of the Household Budget Survey, expenditure on water and waste, and other services related to housing have been revised upwards starting from 1975, and electricity and other energy consumption starting from 1990.

Expenditure on bus journeys was revised downwards starting from 1996 to make it more consistent with the adjustments already made earlier to product subsidies in transport. Narcotics have been estimated into consumption expenditure starting from 1990, they were previously not included at all. Consumption expenditure of resident households in the rest of the world has been revised for 1995-2002 to correspond with the old supply and use tables.

All in all, households' consumption expenditure changed fairly little, it grew at most by half-a-per cent, or good EUR 200 million in 1995.

Consumption expenditure by government grew at most by one per cent or around EUR 300 million in the early 2000s. The main reason was that local government's consumption expenditure had previously been recorded erroneously.

## *Gross fixed capital formation*

Investments in building construction, especially in residential buildings, have been increased starting from 1991 because of re-evaluation of the level of newbuilding. Other investments in building construction have been increased starting from 2003 and decreased in 1995-2001. Building construction investments of agriculture have been decreased starting from 1996 because trotting horse stables and the like do not belong to agriculture. Investments of real estate letting activity have also been reviewed.

In civil engineering, investments in telecommunications have been revised downwards starting from 2003.

Investments in machinery, equipment and transport equipment have been reviewed against data in statistics on the finances of agricultural and forestry enterprises starting from 1999. Investments in machinery and stock by transport and some other activities have also been revised especially in the balancing of supply and use tables for 2003-2006.

The level of investments in software has been lowered because new data have been obtained from certain source statistics, such as structural business statistics. For more details look at action point A.3 Software.

In major land improvement investments, agriculture's investments have been increased starting from 1995 and the figures for forestry starting from 2003 due to the availability of new data sources. Ownership transfer costs of land have been increased starting from 1999.

All in all, investments increased considerably when compared to the previous data starting from the year 1993. At best, the increase amounted to some 6 per cent, or nearly EUR 2 billion, in 2004-2005. In practice, the increase comes from investments in residential buildings.

## *Construction*

In the major revision, output of building construction grew considerably for three reasons.

In August 2007, the volume index of newbuilding released revised time series starting from 1995. In them the level of output of newbuilding went up notably firstly due to risen cubic metre prices of the model buildings on which calculations are based. Secondly, building development is also now included in the new levels of newbuilding and in the output of building construction. Thirdly, even the revised statistics do not cover all new buildings as around 3-5 per cent of the data on building projects are registered late and thus left out of the statistics.

New levels of newbuilding, inclusive of data received late, have now been used in the accounts and the level differential of 1995 has been adjusted back to the old output level of 1990 to which output of building development has been added retrospectively back to 1975. The 1990-1995 level shift has been partly interpreted as growth of prices and partly as growth of volume.

Output of building development has previously been calculated as a percentage share of the value of building construction. In the new calculations, it is based on the turnover of the economic activity and has contracted considerably. Intermediate consumption is also lower than previously, so value added has not really diminished. Output of building development is now circulated through building construction, i.e. it has been added as an equal amount to the output and intermediate consumption of building construction starting from 1975. This did not alter the value added of building construction.

Expenditure of site preparation related to building construction has previously been entered as intermediate consumption, consumption of fixed capital and compensation of employees of building construction. Now it is entered in full under building construction as intermediate consumption purchased from civil engineering. This increases intermediate consumption of building construction, as well as output and intermediate consumption of civil engineering. In civil engineering, the old level of 1995 has been adhered to.

All in all, 2004 value added of building construction grew by about 15 per cent compared to previous data, or more than 800 million euro.

There was no new survey available for renovations 2005. Planning of the renovation survey has only now started and will relate to the year 2010.

**Table: Changes in construction output, intermediate consumption and gross value added, industry F (including civil engineering), million euros, 2004**

		<b>Output</b>	<b>Intermediate consumption</b>	<b>Gross value added</b>
<b>1</b>	<b>New</b>	<b>21879</b>	<b>13666</b>	<b>8213</b>
<b>2</b>	<b>Old</b>	<b>18859</b>	<b>11661</b>	<b>7198</b>
<b>3</b>	<b>Difference 1-2</b>	<b>3020</b>	<b>2005</b>	<b>1015</b>

## Software

In the major revision, the product-flow-method was abandoned.

The level of investments in software has been lowered because new data have been obtained from certain source statistics, such as structural statistics. Investments in software have been separately inquired about in the source statistics since 2006. In central and local government and in non-profit institutions serving households the new lower levels have been chained back as far as the year 1975. In financial and insurance corporations, the old 1995 level has been adhered to and the level differential has been gradually closed to it. In the non-financial corporations sector, however, the level of investments in software has risen slightly in the 1997-2003 period and fallen prior to it. The distribution by activity has also been reviewed.

The price development of software investments has been reviewed starting from 1975. Previously, prices were assumed to rise continuously but according to a new assessment, the prices of software investments have fallen somewhat in the long term.

Investments on software consist of purchased and own-account software. For the business sector (S.11), purchased software is estimated from Structural Business Statistics (SBS). The estimate for purchased software consists of two variables: 1) computer, design and programming expenses and 2) increases and decreases of computer software investments. Software includes bought and customised computer software and licence fees for computer software. Software included in the acquisition price of machinery and equipment is not included. The first variable consists of a mix of expenses and it is assumed that 30% of these expenses are due software investments.

Own-account software is estimated using the wages of IT-personnel in firms from detailed register based data from the Finnish structure of earnings statistics. The International Standard Classification of Occupation (ISCO) classes 1236 (computing services managers), 213 (Computing professionals), 312 (Computer associate professionals) and 4113 (data entry operators) are used. Data on number of employees, average monthly

earnings and average yearly earnings are obtained at the NACE rev.2 2-digit industry classification.

As the multiplication of the number of software personnel by their average compensation provides their total compensation, adjustments have to be made to obtain the labour costs of own-account software production. The report of 2002 OECD Task Force recommends a 50% deduction rule for the time spent by software professionals on tasks other than software development. The 50% share originates from a 29-year old study on the share of software development and maintenance costs reported by Barry Boehm (Boehm 1981). Finland has adopted the 50% deduction to all the industries except industries 32, 51 and 72 (Nace Rev.1). In these industries, it is assumed that most of the software development work made by the employees is for production of software to be sold and not for in-house usage (only ISCO 213 for these industries). For the industries 32 and 51 25% and for the industry 72 10% of the wages are assumed to be for own-account software's.

The 2002 OECD Task Force recommends other adjustments for non-labour costs. As direct data on non-labour costs of own-account software production is hardly available, it has generally to be estimated based on the relationship between labour costs and non-labour costs of relevant industries. In the Finnish own-account software investments estimate a non-labour cost increase for all the industries is made using the ratio of operating surplus/mixed income net to wages and salaries of the industry 72 (Computer and related services).

For central government sector (S.1311), the data on purchased software is acquired directly from the state bookkeeping data; own-account software figures are based on estimates described above.

The investments on software of local government (S.1313) are now based on the Statistics Finland's annual inquiry "Finances and activities of municipalities and joint municipal boards". The inquiry has contained data on software investments since 2006.

The national accounts time series of local government's software investments was revised in January 2010 for 1975-2007. The data of 2007 and 2006 are actual data based on the inquiry, whereas years 1975-2005 were chained using annual changes of earlier data.

In financial institutions (S.12), the estimation is based on different, scarce information available in the S12 subsectors. The final level of this sector is determined in the balancing of supply and use of software investments of the whole economy. The data collection of credit institutions will soon be renewed and new questions about software investments will be included in the data collection template. In the reference year 2013 and onwards figures of software investments for credit institutions will be based on that Statistics Finland's direct data collection.

**Table: Changes in gross fixed capital formation on software, 2006, million euros**

		S11	S12	S13	S14+S15	S1
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<b>1</b>	<b>New</b>	<b>1669</b>	<b>322</b>	<b>220</b>	<b>6</b>	<b>2217</b>
<b>2</b>	<b>Old</b>	<b>1709</b>	<b>524</b>	<b>373</b>	<b>56</b>	<b>2662</b>
<b>3</b>	<b>1-2</b>	<b>-40</b>	<b>-202</b>	<b>-153</b>	<b>-50</b>	<b>-445</b>

## *Revisions for the underground economy*

### *Traditional underground economy, industries*

During the main revision of the Finnish National Accounts, the figures of the underground economy have been checked and data added to national accounts levels. The table below shows the levels of the underground economy 2006 as it was in the report Finland's Non-Observed Economy. The changes were made according this data. Mainly relative share of underground economy from each activity and industry has been used.

	<b>Output</b>	<b>Intermedi ate consumpt ion</b>	<b>Value added</b>
<b>Construction</b>	508	76	432
<b>Bus/coach transport (non-scheduled)</b>	1.7		1.7
<b>Taxis</b>	7.7		7.7
<b>Road freight</b>	152.5		152.5
<b>Removal transport</b>	5.5		5.5
<b>Retail trade</b>	286		286
<b>Hotels and restaurants</b>	242		242
<b>Business services</b>	204		204
<b>Private personal services</b>	133		133
<b>Total</b>	1,540	76	1,464

The methods of estimation underground economy by industries have been described in that report.

There are some changes in the Finnish legislation against underground economy during latest ten years. Concerning repair construction work and use of domestic help a new tax discount system to households was introduced. The results of this system have been described in our Inventory, chapter 3.2.2 and 7.3.2. In addition, the Finnish Tax Authority has given some registration orders concerning foreign workers in Finland. The results and data obtained this way are scarce. This follows from many reasons e.g. the short time workers do not know the system or they are employees of foreign labour leasing enterprise, some are so called sent workers and so on.

The forthcoming new IT-system of national accounts includes a module to underground economy. This means more systematic calculation of

underground figures in the future. The system will be introduced during the next year.

### *Integration of estimates for illegal activities*

The methods and calculations of estimates of illegal activities were included to the report Finland's Non-Observed Economy 2006.

As part of major revision of national accounts, Statistics Finland has integrated estimates of illegal activities in the data. Before only some estimates of prostitution and smuggling were included to figures of consumption expenditures and imports.

Now these estimates on prostitution, and smuggling of alcohol and tobacco were revised according the methods in the Non-Observed Economy report and figures of drugs were calculated and integrated to the accounts.

Drugs:

The calculation of drug use is based on primary sources mainly collected by The Research and Development Centre for Welfare and Health (RDCWH). The data were the number of people (15-54 years) that had used drugs, six different drug types, street price information and the average number of days in the year drug used by types. The use was divided to regular use and occasional use. When number of users, dose prices and days were multiplied, the result is value of total use (street value). The table next shows the process for 2006:

2006						
Regular users						
	Users % of population 15-54 years		dose	á/g	days/year	total
cannabis	0,9-1,1	21000	0,5g	9	100	22,7
amphetamine	0,2-0,4	11000	0,4g	25	200	22,0
opiates	0,1	800	0,5g	100	200	8,0
ecstasy		3000	tabl	16	30	1,4
buprenorfin		2100	tabl	35	200	14,7
cocaine		500	0,5g	100	200	10,0
Total						78,8
			marginal 65 %			51,2
			imports =			27,6
Occasional users						
cannabis	2	85000		9	20	4,2
amphetamine	2	70000		20	20	11,2
opiates	0,05	17500		100	20	17,5
ecstasy	..	4000		16	30	1,9
buprenorfin	0,05	17500		35	30	18,4
cocaine	..	500		100	20	1,0
Total						54,2

The main source is the RDCWH report to EMCDDA. This source is most exhaustive and includes report material from different official sources like customs, police and health organisations. This makes the possibility of double counting small.

There is no estimate for a separate intermediate consumption because smuggled drugs are transported more or less hidden to other products and packages. Also storing must be unofficial and with legal products.

There was no good information on relation of purity and price and so the margin represents both together. The used margin is a rough estimate. The laboratories of Customs and Police make analyses of the confiscated drugs. However, there is no information of the drug price according to purity. The purity percent varies strongly, from near zero to full pure content and purity can vary according to drug.

Purity can have effect on street price but there is no information on actual import price. Normally police and customs tell an estimate of street price.

#### Cigarettes:

The source used for smuggling estimate is Tobacco Statistics by Statistics Finland. This statistical data includes both legally used tobacco and confiscated tobacco. It has estimates also of non-taxed tobacco bought abroad by travellers.

The amount of confiscated tobacco varies from year to year. From 1995 onwards, lowest amount is 1.4 mill cigarettes and highest is 71.7 mills. From 2002 to 2008 lowest amount is 13.6 mill and highest 32.6 mill. Smuggling estimates are based on average percentage of confiscated cigarettes.

According to Customs the Eastern District of Customs, regarding smuggling from Russia, made about 85 % of cigarette confiscations. In Finland, there is no illegal tobacco factory.

All the illegal estimates have been added to the national accounts data in the major revision.

The following table is from the report Finland's Non-Observed Economy, except GVA that is revised as published 2009.

**Table Non-observed economy, 2006, million eur**

	<b>Output</b>	<b>Value added</b>	<b>Imports, goods</b>	<b>Imports, services</b>
<b>Total</b>	1,734	1,618	55	23
illegal	194	154	55	23
underground	1,540	1,464		

The import figures only apply to the illegal economy.

Gross value added at basic prices in 2006 was EUR 143,657 million, and therefore the share of the non-observed economy was 1.13 per cent. The illegal economy alone would have amounted to 0.1 per cent and the traditional underground economy to roughly one per cent.