

Finland: Gross National Income inventory (ESA 95)

Statistics Finland / National Accounts

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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.

This description of the Finnish national accounts approach contains several changes compared with the previous version. Besides the additions and new descriptions agreed on the basis of the GNI Mission of autumn 2002, changes in methods of compilation have made far more illustrations necessary. At the turn of 2002-2003, the Finnish accounts changed over to using supply and use tables based on products, which entailed extra illustrations. Additionally, the description basis used for the accounts was changed to a clearer distribution by institutional sector than before. The resultant changes have been inserted in the text.

The new figures are given in euros from 2000 onwards. Marks (FIM) are also given in old sample tables dating, as a rule, from 1997. Despite the different denomination and the different year, the information given in marks accurately reflects the methods used and the interrelationship of the figures.

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 Unit, which is responsible for macroeconomic statistics. The unit is divided into seven statistics sections. The national accounts section is responsible for

compiling the annual accounts and reforming the accounting system. Other statistics sections participate in compiling the national accounts as follows:

The Economic Indicators section is responsible for the quarterly accounts and for the monthly GDP-indicator. The Economic Structures section produces regional accounts. The Farm Economy section is responsible for keeping the accounts for agriculture. The Financial Accounts section is responsible for financial accounts and calculating general-government finances in the national accounts, as well as for insurance and financial institutions. The Financial Markets, which produces financial statistics and Government Finances section do not take part in compiling the various sub-sectors of the national accounts.

Table 1: Organisation and tasks of the Economic Statistics Unit

Economic statistics (77)						
Management (4)						
National accounts	Economic indicators	Economic structures	Government finance	Farm Economy	Financial Accounts	Financial-markets
- Annual accounts	- Quarterly accounts	- Regional accounts	- Statistics on the finances and activities of municipalities and joint municipalities	- Agricultural enterprise and income statistics	- Financial accounts	- Outstanding credit statistics
- Historical series	- Monthly GDP-indicator	- Input-output		- Income and tax statistics on agriculture and forestry	- EMU debt	- Financial statement statistics of credit institutions
- Capital stock	- Consumer survey	- Regional input-output tables		- Economic accounts for agriculture and forestry (EU)	- Development of quarterly financial accounts of general government	- Interest payment statistics
- Productivity research	- General government quarterly accounts	- Central government revenue and expenditure by region		- Agriculture calculations of national accounts	- Financial institutions calculations of national accounts	- Deposit statistics
- Development of supply and use tables		- Public financing of entrepreneurial activities			- General government calculations of national accounts	- Other financial market statistics
						- Co-ordination of authority data collection
18	8	7	8	5	12	10

At the end of 2002, roughly 25 persons were involved in compiling the national accounts and in the reform of ESA 95. Two persons, partly full-time, worked on Farm Economy Statistics and six worked on Financial Accounts. There were 2-3 full-time staff compiling quarterly accounts and monthly GDP-indicators. Some annual accounts compilers also produced quarterly data. Additionally, two persons develop quarterly statistics of general-government in the Economic indicators section. Six persons compile Financial Accounts statistics. At the end of 2002, around forty of more than 70 staff in the Economic Statistics Unit were involved in compiling the national accounts. The majority of these compilers have been educated to 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. Group projects involving just a few staff were set up for a given length of time to reform accounting. In principle, nearly everyone in the annual accounts staff is involved on an ongoing basis, since reform principles are best disseminated among the staff in this way.

National accounts source statistics are not compiled in the Economic Statistics Unit, exception for local government financial statistics, economic statistics of agriculture and financial market statistics. Source statistics are produced either in other statistics units of the organisation, or in part externally. The number of staff in Statistics Finland at the end of 2002 was roughly 1 000 persons.

Changes are being planned regarding how compiling is organised, allowing for integration of supply and use tables into the annual accounts.

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.

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 constant-price projections. The changeover to SNA 68 was made in 1979 (base year 1975). Subsequently, major revisions were performed in 1984 (base year 1980), 1987 (base year 1985) and 1993 (base year 1990). During major revisions, the time series was adjusted retroactively with effect to 1975, and in 1984 with effect to 1960.

Three kind of adjustments were made to the time series in major revisions. First, so-called level adjustments were made as a result of reference points being set at a new level for the new base year. Secondly, adjustments entailed by changes in classifications and similar factors were made. Thirdly, the errors found were corrected.

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. This reform eliminated from the definitive figures the statistical difference between supply and demand at current prices.

1.2.2 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

provisional) formed the basis 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, regular major revisions were performed roughly every five years to utilise new data and correct any errors observed. Moreover, special attention was paid in the reform of ESA 95 to incorporating the hidden economy in the accounts more exhaustively than before.

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

Data according to the new compilation system for supply and use tables were published in February 2003. Data in the national accounts were changed retroactively to 1995. In spring 2003, so that no interruption would occur between 1994-1995, the time series was chained retroactively to 1975. The base year for the time series at constant prices was changed in 2000. Supply and use tables have not yet been compiled at constant prices. Instead, reform is still ongoing with respect to them.

1.2.3 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.

The third version will be ready in the first half of December of year $t+1$, the fourth version in July of year $t+2$ and the fifth (final) version in December of year $t+2$.

Example of the production times for versions of the national accounts in 2002 according to the practice thus far:

Version	Month
1	February 2003
2	July 2003
3	January 2004
4	July 2004
5	December 2004

Changes to the compilation timetable are currently being planned.

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 July of Year t+2, when the final information becomes available. In the case of the same industry, Versions 2, 3 and 4 are identical to each other. Version 5 is based on supply and use tables and, consequently, on the balancing of the product level. At that stage the data at industry level are generally altered.

Two main factors influence the timetable for compiling the national accounts: user need 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 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 added values 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 added value at basic prices, gross added value 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

Product classification

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

Industrial classification

Finland's national accounts total 100 industries (incl. financial intermediation services) 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.

In addition to classification by industry, use is also made of a classification by producer type based on establishments. There are three main types of producer: market producers, non-market producers and own-account final producers. Other non-market producers are further divided in Finnish national accounts into two sub-groups: general government institutions and non-profit institutions. General government in turn is divided into three sub-groups: central government, local government and social security funds. Gross value added – with some exceptions – is obtained from the difference between output and intermediate consumption. The gross value added of general government and non-profit institutions equals the sum of compensation of employees and consumption of fixed capital. In addition, other taxes on products must be added for the two industries in local government.

Classification by sector

Besides the classification 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 production and generation-of-income accounts but the distribution and use of income accounts, and the capital and financial accounts among the accumulation accounts.

Production accounts and generation-of-income accounts at current prices are prepared under three classifications according to industry, producer type and institutional sector. Also, the basis for the classification of production by industry is 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, and local government financial statistics.

1.3.2 Valuation

Finland's national accounts are prepared in euros. The unit 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, currently at 2000 levels. A fixed base year is used, changed at five year intervals. This description treats the accounts as being at market prices, not constant 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 EU structural account regulations.

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 includes the business register, which covers all business enterprises, associations and self-employed persons, but not farm holdings. 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. A trial calculation of GDP by the income approach was undertaken in the years 1995-1997.

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 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, 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 wage 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.

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 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.

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 on the basis of the production approach. The expenditure approach is taken into account also 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 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 are 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, 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 and the Financial Statement and Report 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 in 1990-1996.

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.

To a certain extent, foreign trade in services may be considered a problematic expenditure component from the standpoint of exhaustiveness in the national accounts. The collection of data by the Bank of Finland regarding payments from sources abroad was discontinued at the end of 1998, and the production of foreign trade statistics was transferred to Statistics Finland. Foreign trade services between enterprises is now being investigated through a poll of such enterprises.

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 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 event areas belonging to each. In these calculations, source data is 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 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 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 according as the data nears 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 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 is derived is given in parentheses)

- * Exports of goods and services (from foreign trade calculations)
- * Household final consumption expenditure (from final 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 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) 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 (compensation of employees) are adjusted in accordance with corresponding data in the household and rest-of-the-world sectors. This adjustment is shown in conjunction with industry data at the aggregate level. Because in making the adjustment we do not want to alter the level of GDP, the operating surplus is adjusted by a figure with the opposite sign corresponding to the absolute value of the total of wages and salaries and 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.

The value added of the economy can also be obtained as the total of the value added of separately calculated production accounts by sector. It is considered a less reliable and accurate estimate than that calculated as the total of industries.

and so remains subordinate to value added as calculated through the industries described above.

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 must be approved in practice if it is not greater than $\pm 1\%$ of GDP at current prices and its contribution to the annual change in GDP is not greater than $\pm 1\%$. 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 is obtained when 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 rather 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 real estate ownership and leasing 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, recourse is had to the production and generation-of-income accounts so that intermediate consumption may be adjusted 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.

Where data at current prices are concerned, balancing in the definitive version is performed in a comprehensive way and no further discrepancies occur. For this reason, discrepancies at constant prices are a more serious problem because supply and demand are set at constant prices entirely independently of each other. In order to keep these price ratios in equilibrium, a method is needed by which supply and demand flows are systematically controlled. Balancing based on supply and use tables by products at constant prices is just such a method and is one to which Statistics Finland is now in the process of transferring. This approach also operates as a more systematic balancing method than the one currently used to reconcile supply and demand at constant prices.

The other factor that impacts balancing of constant-price supply and demand is the fixed base year. In Finland, the base year changes every five years. While this is a relatively short period, allowing the base year to recede overmuch can skew supply and demand price ratios – especially in a system such as Finland's in which constant-price supply and demand are calculated separately. A base year that changes yearly would alleviate this problem and, in fact, Statistics Finland is in the process of transferring to such a procedure.

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.

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 is considered to be more reliable at the time. The supply data is generally more reliable at the product level and, consequently, it changes less. Adjustments are made, as a rule, with a view to bringing supply or use as close as possible to the 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 the purpose of 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 impact 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 due to the fact that, for example, a total of roughly 290 products were balanced manually in 2000 out of a total of 947 products.

Balancing price formation

After manual balancing, recourse is had to 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 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 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 is 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 difference. 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 difference 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 difference.

Eliminating statistical discrepancy

The impact on added value 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. 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. The table below summarises possible measures to be taken for selected product groups:

Table 2. Possible steps in eliminating statistical differences.

Measure	Supply >use	Supply <use
Increase supply		x
Decrease supply	x	
Increase use	x	
Decrease use		x
Increase supply and decrease use		x
Increase use and decrease supply	x	

Since the situation at the aggregate level is of necessity only according to the one column, there are always three options. 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 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 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 impact 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 also is 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 so as 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 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 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 are 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 1 000 euro per product. Finally, the balanced matrix is combined with the data that were initially omitted.

Directly compiled balance of supply and demand that are fully in equilibrium are obtained from this table, one in which statistical discrepancy do 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 also. 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 impact 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 added value. 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.

Data at constant prices

The production of resource and expenditure data is still generated in the same way in both the preliminary and definitive versions of the national accounts. The estimates derived from new data at constant prices are balanced only at the level of resource and expenditure components.

The problems mentioned in Section 1.6.5. remain largely unchanged, following compilation of the definitive resources and expenditure at constant prices. The preliminary and definitive versions differ from each other by the fact that, in the latter, the figures at current prices for which constant prices must be set are in equilibrium. As a result, the statistical difference between them cannot move

in different directions, at least. Additionally, the balancing of figures at current prices hopefully will point estimates at constant prices also in the right direction. The problem will be resolved only after a transfer to constant price supply and use tables.

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 comes 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)
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 is retained and broken down in the paying sector by separate calculation (direct taxes).

Reconciliation of balance of resources and expenditure with sector accounts

The production and generation-of-income accounts of the general government, financial and non-profit institution sectors are obtained (in the first preliminary data) as the total of industry calculations calculated at the sector level. The production and generation-of-income accounts of enterprises and households are calculated independently for each sector from data sources for that sector. The total of production and generation-of-income accounts by sectors so obtained differs from that of the production and generation-of-income accounts calculated by industry. Likewise, the value added and other components calculated through sector accounts also differ from those calculated through industries.

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

As an exception to this, the data by sector for operating surplus and investments may entail adjustment of the balance of resources data. This is especially so of the first version, i.e. compiling the first preliminary annual version.

Normally, discussion takes place between sectors as to how feasible it is to change the data of any particular sector with respect to operating surplus, deterioration and investments. Generally, the discussion occurs between the non-financial corporations and household sectors and sometimes, especially in the first preliminary annual version, other sectors may enter the question.

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 on the basis of 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, households or rest-of-the-world 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.

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 who are employers, whether subject to value added tax or belonging to the preliminary withholding register. Local government units are on a separate data base. The business register does not include 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 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. General government data is derived from the central government accounting system. Data concerning social security funds is 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 not only regarding 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 to the objectives of the balance of payments and the national accounts in order to attain full exhaustiveness. In calculating foreign trade services, a shift has taken place from statistics based on the foreign transactions of banks to statistics based on the enterprise survey.

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.

Trade statistics do not yet yield product specific sales data. Instead, 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 is mainly based on data gathered by the tax administration. Such data is 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 of Trade has 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 authentically compare 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 third 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 due to the fact that 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 to 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 Population Register Centre. These data are used to calculate value and volume. Data available includes 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 self-managed construction. All types of construction are classified so that value at basic prices is obtained also for self-managed 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 construction and data about household final consumption expenditure on renovation construction.

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

Gross fixed capital formation of construction as well as other investment demand items are calculated by industries. Appropriate supply data are available for such calculations by industries. 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 data base combined with Structural Business Statistics, which includes direct survey material concerning the tax administration, the Business Register and Structural

Business Statistics. Separate establishment data is 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 on the basis of 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 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 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

The statistical base of the Finnish national accounts has broadened during the last decade. There is more data about enterprises in Structural Business Statistics than in the earlier business statistics and exhaustiveness has especially improved by means of the fusing of the business tax data and the financial statement survey of enterprises. This and the improvement of other basic statistics, such as the reform of the business register (quality improvement since 1996) form a sound basis for the GDP figure. The report "The unofficial economy and the Finnish national accounts" has given guidelines and direction to the work of analysing exhaustiveness. Employment comparisons and tax audit reports have also been carried out.

The production approach is the most important calculation method in the Finnish national accounts. Calculations are performed by industries. The key source data are total data (Business Register, Structural Business Statistics) and are exhaustive in relation to registered economic units. Although the primary sources are aggregate sources, the difference between sources may stem from random errors or other reasons. When calculating figures by industry, the sources are compared with one another and with other potential basic data.

Besides the main sources it can happen that the following sources are overlooked:

- random parts of the data on registered units (due to non-response or impossible to estimate by usual methods)
- temporary (small) units and units left unregistered in order to avoid tax.

These groups are the subject of scrutiny when evaluating the scale of hidden economy factors in the national accounts. Below are described the methods and kind of work employed in making estimates.

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 give rise to suspicion.

This means that only a rough evaluation 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 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 – except services related to construction – converge with the balance of payments in the national accounts.

1.8.1 Compensation of employees

Only net wages and salaries, and not employers' social contributions, are recorded in this item. As far as social security contributions are concerned, the availability of data and estimation methods are being investigated.

Wages and salaries received from abroad

Taxation debiting contains 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.

Wages and salaries paid to the rest of the world

The figures are based on an estimation by an expert at Statistics Finland. The value is based on median salaries and on an estimate of the numbers of non-residents who have worked in Finland.

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) and taxes and duties on imports excluding VAT (D212) paid since 1995 by Finland to the EU. These items are to be found in final central government accounts, 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 include – in addition to regular import duties – imports 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. Import taxes have been payable to the EU since 1995.

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 since 1995. 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. 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.

When a time adjustment is made to the Development Fund of Agriculture and Forestry, the aggregate level of subsidies is obtained. 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, until 1998, consisted of the foreign payments data maintained by the Bank of Finland and its direct surveys of enterprises. In addition, the Bank's own accounting data regarding foreign capital indemnities and expenditures were used. Beginning in 1999, capital indemnities and expenditures are based on the latter two data sources.

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.

1.8.5 Distributed income of corporations

Profits distributed by corporations are dividends.

Foreign dividends receivable or payable of enterprises are obtained on the basis of 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.

1.8.6 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.

1.8.7 Property income attributed to insurance policy holders

Property income attributed to insurance policy holders (as income) is calculated, since 1998, on the basis of insurance surveys. This item did not occur previously in Finland.

1.8.8 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 Transition from gross domestic product (GDP) to gross national income (GNI) (ESA 79 definition)

When transferring from GDP in accordance with ESA 95 to gross national income (GNI) in accordance with ESA 79, the differences in accordance with Commission Decision No 7/178/EC must be appraised and recorded. The differences and how they are quantified are described in Chapter 9.

Chapter 2 Revisions policy 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 kind of adjustments were made to the time series in major revisions. First, the errors found were corrected. Secondly, so-called level adjustments were made as a result 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.

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, regular every five years major revision was performed 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 detail. 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 so as to be based on supply and use tables. Final figures at current prices are based on product specific supply and use tables with effect from statistical year 1995. Preliminary figures and figures at constant prices are still being calculated in the traditional way but they are adjusted to conform with supply and use tables at current prices for 1995 – 2000. In conjunction with the reform, 2000 was established as the new base year and a number of other changes were made.

In order that no break in the time series would occur between 1994 and 1995, the time series was made retroactive to 1975 in May 2003. The series was chained for the most part, but authentic figures were also calculated in part, and the level difference in 1995 was faded out retroactively in linear fashion.

Various options for calculations at constant prices will be investigated in the third phase of the reform, especially. At that stage, calculations at constant prices based on supply and use tables will be studied as well as changing the base year annually. It is intended to complete the reform by the end of 2005.

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.

Up to and including 2000, an interim version of Year $t+1$ was prepared at the end of March. At that point, the previous year's fourth quarter national economy accounts were produced and annual accounting data were balanced to tally with the total for the four quarters. This interim version has been shelved since the year 2001 and the publication of data applying to the fourth quarter was rescheduled until the end of February.

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 in their entirety for the first time.

The third version was ready in the first half of December in Year $t+1$, the fourth version in July of Year $t+2$ and the fifth (definitive) version in December of Year $t+2$.

Example of production times for different versions of the national accounts of the year 2000:

Version	Month
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1	February 2001
2	July 2001
3	December 2001
4	July 2002
5	December 2002

Due to the reform, final figures for 2000 – the fifth version – appeared in April of 2003 (and not in December 2002). Changes in compilation timetables are under consideration. 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 July of Year $t+2$, when the final information becomes available. In the case of the same industry, Versions 2 and 3 are identical with each other, as are Versions 4 and 5.

Two main factors influence the timetable for compiling the national accounts: user need 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 1998 and 1999.

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 index of wage and salary earnings, production statistics for various agricultural products, felling statistics for commercial timber and timber price statistics, the volume index of manufacturing, the volume index of housing starts, trade sales statistics, financial statement estimates for local authorities and local government regional authorities (since 1999), 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, central government accounting records and 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 housing starts, trade sales statistics, the Financial Statement and Report, 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 November-December of Year T+1), the new data includes 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.

When the fourth version (in May-July of Year T+2) is being prepared, among the fresh data available are the Business Register (YTR), 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 fifth 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.

Changes to timetables and checking procedures may occur when compilation of the final figures based on supply and use tables is settled.

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 2000 .

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 traditionally 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 3: GDP level and distribution by industry in 2000

	€ million	%
<i>Gross added value at basic prices, € million</i>		
A, B Agriculture, forestry, hunting	4 193	3,7
010, 014 Agriculture and related services	1 675	1,5
02 Forestry and related services	2 456	2,2
015 Hunting, trapping and game propagation	62	0,1
B Fishing	83	0.1
C, D, E All industry	32 401	28.6
C Mining and quarrying	266	0.2
D Manufacturing	30 143	26.6
DA Manufacture of food products, beverages and tobacco	1 779	1.6
DB, DC Manufacture of textiles, textile products, leather and leather products	554	0.5
DD Manufacture of wood and wood products	1 352	1.2
DE Manufacture of pulp, paper & paper products, publishing and printing	7 035	6.2
21 Manufacture of pulp, paper & paper products	5 390	4.8
22 Publishing and printing	1 645	1.5
DF Manufacture of refined petroleum products, coke and nuclear fuel	397	0.4
DG Manufacture of chemicals and chemical products	1 541	1.4
DH Manufacture of rubber and plastic products	983	0.9
DI Manufacture of other non-metallic mineral products	925	0.8
DJ Manufacture of basic metals and fabricated metal products	3 123	2.8
27 Manufacture of basic metals	1 307	1.2
28 Manufacture of fabricated metal products	1 816	1.6
DK Manufacture of machinery and equipment n.e.c.	3 192	2.8
DL Manufacture of electrical and optical equipment	7 708	6.8
DM Manufacture of transport equipment	874	0.8
DN Manufacturing n.e.c. and recycling	680	0.6
E Electricity, gas and water supply	1 992	1.8
F Construction	6 632	5.9
4501, 4509 Building construction and construction services activities	5 230	4.6
4502 Civil engineering	1 402	1.2
G Trade; repair of motor vehicles and domestic appliances	11 425	10.1
50 Sale, repair and maintenance of motor vehicles; service stations	1 692	1.5
51 Wholesale trade and commission trade	6 239	5.5
52 Retail trade; repair of household goods	3 494	3.1
H Hotels and restaurants	1 607	1.4
I Transport, storage and communications	12 096	10.7
IA Transport and storage	8 373	7.4

60 Land transport	4 234	3.7
61 Water transport	746	0.7
62 Air transport	677	0.6
63 Supporting and auxiliary transport activities	2 716	2.4
641 Postal and courier activities	984	0.9
642 Telecommunications	2 739	2.4
J Financial intermediation and insurance	4 472	4.0
65 Financial intermediation	3 506	3.1
66 Insurance	517	0.5
67 Activities auxiliary to financial intermediation and insurance	449	0.4
K Real estate and business services	19 242	17.0
KA Real estate activities	11 934	10.5
7021 Ownership and letting of dwellings	9 689	8.6
701, 7022, 703 Other real estate activities	2 245	2.0
KB Business activities	7 308	6.5
72 Data processing activities	1 820	1.6
L Administration, compulsory social security	5 562	4.9
M Education	5 505	4.9
N Health and social work	9 015	8.0
851, 852 Human health and veterinary activities	5 320	4.7
853 Social work activities	3 695	3.3
O Other community, social and personal services	3 976	3.5
P Domestic services	143	0.1
991 Financial mediat. services indirectly measured (discretion. FISIM)	-3 167	-2.8
<i>Total (sum of all industries)</i>		
	113 185	100.0
Of which primary production (A + B)	4 276	3.8
Secondary production (C + D + E + F)	39 033	34.5
General government services (I + K + L + M + N + O)	20 018	17.7
Private services (G + H + I + J + K + M + N + O + P + 991)	49 858	44.1

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 by sector

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.

Classifications by sector as used in Finland are 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.

While production and generation of income accounts in industry accounts are presented jointly for enterprises and households, their sector accounts are compiled separately. Producer types are not identified at the publication level.

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. Also used are 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. Data calculated in marks (FIM) were used for earlier years in this description of the method. One euro equals FIM 5.94573.

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 compiled also at constant prices, the base year is at the moment 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:

<i>National accounts</i>	<i>Profit and loss account</i>
	GROSS SALES
	- Indirect taxes
OUTPUT at basic prices	= TURNOVER (incl. change of inventory, production for own use and other return on business activities, but excluding 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.

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 issued guidelines about interpreting the law and has determined the maximum value of durable goods to be recorded as intermediate consumption. This value has increased over time but is not the same as ESA-based ECU values. 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 attached table shows the primary estimation method or data source used for the various industries.

Table 4. 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, Business register and structural business statistics	Structural business statistics ,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, local authority financial statistics	Structural business statistics, Financial Statement and Report, 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	Sample of profit and loss statements of enterprises	Sample of profit and loss statements of enterprises

insurance		
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
General government:	Compensation of employees:	Intermediate consumption:
Central government finances	Financial Statement and Report	Financial Statement and Report
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 annual accounts	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 50 million euros 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 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 restaurant services.

3.7. Agriculture, hunting and forestry (A)

3.7.1. Agriculture, hunting 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, and 015 Hunting, trapping and game propagation, including related service activities.

3.7.1.1. Main data sources

Data applying to production volumes are gathered from enterprises which receive agricultural products for processing (dairies, slaughterhouses), or trading purposes, and from local agricultural industry units, or holdings. Harvest figures for growing crops, market gardening and horticulture and information on egg production and on output for own final consumption are gathered from individual producer units. In addition, output figures of small units producing solely for own final consumption are gathered from individual producers (by means of Household Budget Surveys).

Most of the accounting data on prices and production volumes applying to output is gathered by the authority mainly responsible for compiling statistics on agriculture, i.e. the Ministry of Agriculture and Forestry Information Centre (TIKE). The data supplied by TIKE are also used to identify CAP subsidies on products. The data sources are based partly on overall statistics and partly on sampling. 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, the Agricultural Economics Research Institute (MTT), the Farm Accountancy Data Network (FADN) and *Kasvistiето*, 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 feed mixes. For data sources on other goods and services used in agricultural production, recourse is had to the agricultural enterprise and income statistics and the annual accounting statistics of enterprises, both of which are prepared by Statistics Finland.

Agricultural enterprise and income statistics are based on simply stratified random sampling and prepared on the basis of the income tax returns and ancillary statistics forms of agricultural self-employed persons. The basic framework group comprises roughly 90 000 farm holdings from which a sample of about 10 500 is selected. The key sorting 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 mean proportional error for the sum total of variables in most surveys used for national accounting purposes is only approximately one per cent.

Some agricultural activities – the management of fur animals, reindeer and bees – are considered as separate accounting entities whose source data are gathered by the industry's organisations. Statistical data related to the picking of wild berries and mushrooms are gathered by Food Facts Oy. This is a private institution engaged in market research. For agricultural services, accounting relies on animal husbandry statistics drawn up by TIKE. It relies, for artificial insemination, on data compiled by the central union of associations that provide A. I. and relies, for the guidance it offers on agriculture, on economic data gathered by the industry's central union.

Because accounting calculations applied to agriculture are compiled on the basis of 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.

Statistics Finland

- Labour Force Survey
- Service database of structural business statistics
- Business Register

Finnish Game and Fisheries Research Institute (RKTL)

- Agriculture, Forestry and Fisheries; Wild Game Catches

Central Organisation of Hunters (MKJ)

- Profit and loss statement and balance sheets
- Consolidated profit and loss statement and balance sheets of game management areas and game management associations

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.

Hunting as a whole includes the value of wild game catches and the activities of organisations promoting game husbandry. Wild game catches are classified as final own-account output of non-market producers in the household sector, of which the value of the edible game sold is classified as market output.

The activities of organisations promoting game husbandry are classified under market producers and the output as a whole under market output. Promoting organisations have not been assigned any sector classification; instead, recourse is had to a combined households and enterprises category.

Animal husbandry

Animal production

Animal output is calculated on the basis of 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 extra 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. Because retroactive payments are not included in producer prices for slaughtering at the holding, output value in these circumstances is lower than that obtainable through invoiced delivery. Slaughterhouse statistics cover over 99 % of slaughtering.

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 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, so that only the main category O "Other social and personal services" in industries 926 and 927 count as gross fixed capital formation from horses.

Gross fixed capital formation from own end use of animals as output 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 changes in inventories. Data about the number of livestock are gathered by TIKE from sample surveys in December. The change in the bovine population is valued for the calendar year at median 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 5: Animal production 1998

Species	Slaughtered weight Tonnes	Producer price FIM/tonne	Output for own end use Value	Export of live animals Value	Changes in inventories Value	Product subsidies Value	Output value FIM 1 000
Bovine animals	93 758	13 393	179.0	0.2	-48.7	464.8	1 851.0
Swine	184 520	7 523	82.9	0.6	56.4	300.1	1 828.2
Sheep	1 180	9 831	0.0	0.2	-2.9	17.6	26.5
Poultry	66 100	6 828	0.0	2.0	1.2	65.0	519.5
Horses	480	6 875	0.0	0.0	8.4	0.0	11.7
Reindeer	2 080	26 680	0.0	0.0	-1.8	0.0	53.7
Animals, total	348 118	9 093	261.9	3.0	12.6	847.5	4 290.6

Animal products

Milk

Dairy statistics compiled by TIKE are used principally as a data source for milk production. Milk delivered to dairies comprises 96 % of all milk production.

Data on dairy statistics are gathered by means of surveys conducted in all dairies each month. The statistics show *inter alia* the number of milk sources, deliveries of milk, the producer price, product subsidy, milk consistency, use of raw materials and manufacture of milk products.

Production data for milk that is sold for the producers' own consumption and from holdings for direct consumption are obtained from TIKE based on sample surveys conducted in June and December. The pricing information used is that given in the dairy statistics.

Changes in the consistency 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

Production data for eggs are based on sample surveys conducted by TIKE. Surveys in June and December request information on the number of eggs and the chicken count for the week before. The annual growth in egg output is calculated based on the surveys. Data applying to producer prices are also based on TIKE's statistics.

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

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

Fur pelts 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 6 : Animal products 1998

Product	Output (tonnes)	Producer price	Product subsidies	Quality premium	Output value in FIM mill.
Creamery milk (1 000 l)	2 293 743	1 988.2*	1 321.7	137.9	6 020.0
Raw milk to direct final consumption (1 000 l)	28.0	1 864.1	1.5		53.7
Milk, total	2 321 743		1 323.2	137.9	6 073.7
Eggs					
For consumption	63.9	3 840			245.4
For domestic use	1.2	3 840			4.6
Total	65.1	3 840			250.0
Fur pelts (Pelt)	4 191 000	158.53			664.4
Reindeer hides (Hide)	87 100	43			3.7
Honey (incl. domestic use)	850	22 220			18.9
Wool	0.12	5 000			0.6
Total		..	1 323.2	137.9	7 011.3

* Includes retroactive extra payments paid by dairies after 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 harvest data per hectare are based on TIKE sample surveys. Wastage after harvest and reseedling supplies for producers 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) producer use of cereal as animal feed, 4) cereal as a food source for holdings, and 5) changes in inventories.

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, maltings, 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 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 the Grain Bulletin.

Sample surveys by TIKE collect data on deliveries of grain between holdings and on the use of cereals produced by holdings for animal feed and domestic purposes.

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 all five items in use. 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 inventory and non-inventory parts of output and then between other items based on the volumes used. Subsidies include those in the common agricultural policy and domestic subsidies on products. The latter only apply to deliveries outside the industry. The common agricultural policy subsidies are available through the integrated management and control system and other subsidies through the Ministry of Agriculture and Forestry's income subsidy unit.

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

Table 7 : Cereal plant output 1998 (in tonnes)

Type	Harvest	Wastage, own use of seed	Sales by the industry	Sales between holdings	Use of feed	Con-sumption	Changes in inventories	Output
Wheat	396 900	35 166	358 623	16 300	21 500	700	-35 389	361 734
Rye	49 300	4 900	28 710	500	1 700	1 000	12 490	44 400
Barley	1 316 200	53 900	931 178	190 700	399 343	2 800	-261 721	1 262 300
Oats	975 100	73 000	454 594	141 700	374 863	3 000	-72 057	902 100
Total	2 737 500	166 966	1 773 105	349 200	797 406	7 500	-356 677	2 570 534

Table 8 : Cereal plant output at 1998 basic prices

Type	Output	Producer price FIM/tonne	Subsidy on product	Output FIM 1 000
Wheat	361 734	851	148.0	455.9
Rye	44 400	872	38.4	77.0
Barley	1 262 300	730	546.7	1 468.2
Oats	902 100	664	344.7	943.8
Total	2 570 534	726	1 077.8	2 944.9

Sugar beet

Volumes 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 1998 came to 892 000 tonnes and quality premiums amounted to FIM 3.6

million. When quality premiums are factored into the output value, without changing the producer price, the amount of output amounts to 904 000 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. 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.

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 market garden business 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 market garden 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 market garden register. Data on prices are gathered by Kasvistieto.

Data on prices and amounts 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 amounts being traded are obtained from the trade's central unions and from

notifications submitted by enterprises specialised in the trading of wild berries and mushrooms.

Fresh berries

Calculations for fresh berries are made on the basis of 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.

Decorative plants and seedlings

Estimates of decorative plant output 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 the Finnish Association of Nurserymen.

Table 9 : Plant output other than cereals at 1998 basic prices

Type	Output, tonnes	Producer price	Value	Product subsidies	Output at basic price, FIM mill.
Sugar beet	903 883	309	279.3	24.6	303.9
Oil bearing plants	63 900	1 270	81.2	107.9	189.1
Protein plants	4 200	690	2.9	7.6	10.5
Potatoes	598 400	801	479.6	31.1	510.7
- for industry	323 232	336	108.7	31.1	139.8
- producer end use	121 500	1 360	165.2	-	165.2
- other	173 668	1 184	205.7	-	205.7
Vegetables	-	-	863.7		863.7
- fresh vegetables	-	-	790.9	-	790.9
- cultivated mushrooms	1 364	19 872	27.1	-	27.1
- wild mushrooms	4 720	9 680	45.7	-	45.7
Berries			589.1		589.1
- fresh			397.2		397.2
- wild			191.9		191.9
Fruit			16.8		16.8
Decorative plants and seedlings	-	-	648.0	-	648.0
Fodder plants			2 763.7		2 763.7
Other			17.4		124.4
Total			5 848.7	171.2	6 019.9

Agricultural services

Agricultural services include livestock inspections and advisory work for artificial insemination and agriculture. A. I. output, intermediate consumption and value added calculated as the difference between them are based on data supplied by the Union of Artificial Insemination Associations, the industry

organisation. The corresponding data on livestock inspections are prepared by TIKE, based on data it gathers in summarised form.

Value added for advisory work is calculated differently from the rest, as the total of its components. This activity, which is financed mainly by government transfers and grants, is not considered to generate any operating surplus/mixed income. Nor is gross fixed capital formation thought to arise, so no consumption of fixed capital occurs. Value added on advisory work is therefore limited to compensation of employees.

Some of the activities to be treated as undifferentiated 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.

Activities other than agriculture and those inseparable from it

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, reprocessing agricultural products, etc. Price 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.

The output of hunting is the imputed value of the wild game catch and the output of the organisations promoting game husbandry. Wild game catches are classified as own-account output. A small share of elk catches is assumed to be market output. The output of organisations promoting game husbandry as a whole is market output.

The output of organisations promoting game husbandry is obtained by a survey of the Central Hunting Organisation (MK), which covers all the units belonging to the category, the Central Hunting Organisation, game management areas, and game management associations. The output is largely an advisory, training and registration service, which is purchased by the Ministry of Agriculture and Forestry. Additionally, some services are paid by hunters as households.

The volume, price and value of wild game catches are to be found in the RKTL publication: 'Maa-, metsä- ja kalatalous. Riistasaalis' (Agriculture, Forestry and Fisheries; Wild Game Catches). Most of the output consists of elk meat, of which only a small share is put up for sale. The basic price for elk in statistics

is to be found in the sales data on catches. Other game animals are assessed by RKTL in accordance with the imputed producer price.

Table 10 : Output of agriculture industry 1998, in FIM mill.

	Output, Producer price	Product subsidies	Output at basic price
Animal output	3 443.1	847.5	4 290.6
Animal products	5 688.1	1 323.2	7 011.3
Animal husbandry, total	9 131.2	2 170.7	11 301.9
Growing of plants, market gardening	7 715.8	1 249.0	8 964.8
Production of agricultural goods, total	16 847.0	3 419.7	20 266.7
Agricultural services	396.0	-	396.0
Agricultural production	17 243.0	3 419.7	20 662.7
Undifferentiated activities	813.0	-	813.0
Hunting and game propagation	215.0		215.0
Agriculture industry, production	18 271.0	3 419.7	21 690.7

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 is 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 financial statistics in the annual accounts of enterprises. The Farm Accountancy Data Network is used to divide aggregate costs of individual products in the financial statistics of companies.

The financial 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 Business Income Tax Act and those of the other under the Agricultural Produce Pricing Act. 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.

Seeds and seedlings

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 land improvement materials

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, herbicides 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 medicine costs

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

Animal feed

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.

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

Service and repair of machinery and equipment 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 annual financial returns of businesses 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.

The source of the intermediate consumption of organisations promoting game husbandry is the same as for output.

There is no intermediate consumption for the household sector; instead, hunting expenditure is included in households' final income expenditure.

Table 11: Intermediate consumption 1998, FIM mill.

Seeds and seedlings	370.2
Energy; lubricants	1 165.4
Fuel and lubricants	663.4
Electricity	434.3
Firewood and commercial timber	67.7
Fertilisers and land improvement materials	1 287.0
Plant protection, herbicides and pesticides	316.3
Veterinary expenses	355.0
Animal feeds	6 090.4
Service and repair of machinery and equipment	814.0
Maintenance and repair of buildings	348.0
Agricultural services	396.0
Other goods and services	3 142.7
Intermediate consumption, total	14 285.0

3.7.1.4. Value added

The value added to the basic price 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 (SIC95 02) consists of four accounting subindustries. The silviculture subindustry covers forest improvement work and reforestation (SIC95 02011 and 02012). The logging subindustry is felling and short distance haulage of trees (SIC95 02013). Other forestry (SIC95 02019) includes other forestry products and environmental protection measures. Other forestry (SIC95 02020) includes forestry services, advice and information for forest owners, etc.

All establishments of the forest industry and related services are classified as market producers. In the logging 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 the combined household and enterprises sector classification.

ESA 95, Section 3.58 states that: "Growing crops, standing timber and stocks of fish or animals reared for purposes of food should be treated as inventories of work-in-progress during the process and transformed into inventories of finished products when the process is completed." Again, Section 3.119 states that inventories consist of the following categories "(2) maturing trees and livestock".

Paragraph 2.06.13 of the "Manual on the Economic Accounts for Agriculture and Forestry" (EAA/EAF 97) states that the implementation of the ESA 95 regulation is complicated and difficult in practice. Consequently, it was agreed that, for purposes of compiling forestry economy accounts, output would be measured on the basis of trees cut because inventories for growing trees are relatively stable (the volume of inventories does not alter significantly for one year to the next).

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 and activities related to silviculture. Changes in inventories arising from timber growth are not recorded. The proportion of felled trees to overall growth will be clarified.

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

Sylviculture

Statistics Finland

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

The Finnish Forest Research Institute (METLA)

- Yearbook of forest statistics
- Special reports

The Forestry Development Centre Tapio

- Yearly statistics, value of seed production

Logging

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

National Board of Forestry

- Annual report

Metsäteho Oy

- Average logging costs

Statistics Finland

- Index of forestry sector machine costs (MEKKI)
- Labour Force Survey
- Wages and salaries of agriculture and forestry employees
- Business Register
- Statistics of municipalities and joint municipal authorities
- Final central government accounts and budget estimates

Evangelical Lutheran Church of Finland

- Profit and loss statement and balance sheet

Other forestry

National Board of Forestry

- Annual report

Statistics Finland

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

Activities serving the forestry industry

The 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

Forest improvement

Output

The output of the forest improvement industry is obtained from the total of the turnover of forest improvement enterprises in the business register. The establishments perform forest improvement services and grow seedlings. The entire output is classified as market output.

Intermediate consumption

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

Income on the sale of wood, logging services and reforestation and major land improvement measures belong to the logging production account insofar as these activities are own-account output.

Forestry income from the sale of wood on the stump (the basic price being the stump price) is calculated by multiplying stumpage rates for each species in private forests by the corresponding quantities. These volumes include commercial cutting in private forests (including municipalities and parishes), the Ministry of Defence and the Forest Research Institute. The volume of wood cut by forest industry enterprises from their own forests is also multiplied by the same rates. The price of fuel wood is set at 90 % of the price of non-coniferous pulpwood. Other special timber are not individually priced. Instead, prices are considered to be reflected in the stumpage rates for each species and the quantities cut. The price statistics for timber cutting, published twice a year, cover roughly 90% of timber sales from private forests in the country as a whole. The volume statistics for timber felling, also published twice a year, are gathered in separate samples from each forestry centre. The companies included in the sample acquire roughly 95% of all commercial timber cut in Finland.

The total value of forestry income from the sale of wood that is purchased for later delivery (the basic price being for delivery to the roadside) is calculated by multiplying quantities of delivery wood and wood for domestic needs for each species by a purchase price for later delivery specific to wood products. The price of firewood is set at 90 % of the stump rate for non-coniferous pulp wood.

The output of National Board of Forestry logging is obtained from its profit and loss statement (the basic price being for delivery to the mill).

The output of local sector forestry is to be found in the revenue statistics of the municipalities and joint municipal authorities; the output of forestry activities by the church is to be found in its profit and loss statement (the basic price being the stump rate, the rate delivered to the roadside, or delivered to the mill).

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 distribution of income statistics. Expert estimates are based on random local price surveys and information on the volume and price of Christmas trees cultivated and sold.

The output of logging services is the total of the activities turnover of logging enterprises in the business register.

Data regarding land and other own-account production 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.

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 logging services is to be found in Statistics Finland's structural business statistics survey data. Also to be included is the intermediate consumption of acquisition work, and the repair and maintenance cost of forest ditches and roads.

Other forestry

Output

Most of the output of Other forestry derives from the environmental protection activities of the National Board of Forestry. 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 the NBF 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 NBF's profit and loss statement, and supplementary questions in Parliament regarding the use of NBF 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 (Forest statistics yearbook), the value of the output of other forestry enterprises and that of the environmental protection activities performed by the NBF.

Intermediate consumption

The source for the intermediate consumption of the NBF is the profit and loss statement of the NBF and supplementary questions in Parliament regarding the use of NBF 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 12. Production account and generation-of-income account

		SECTORS	UNSEPARATED	LOCAL GOVERNMENT	NON-PROFIT INSTITUTIONS
		TOTAL	SECTOR	SECTOR	SECTOR
Forest management					
<i>Production account</i>	<i>Output at basic prices</i>	59	59		
	Market output	59	59		
	Seedling production		34	34	
	Land and other major improvements		25	25	
	<i>Intermediate consumption at purchaser' prices</i>	24			
	Seedling production		16		
	Other intermediate consumption		8		
	<i>Value added gross, at basic prices</i>	35	35		
	<i>Consumption of fixed capital</i>	12	12		

	<i>Value added net, at basic prices</i>	23	23		
<i>Generation of income account</i>	<i>Wages and salaries</i>	17	17		
	<i>Employers' social contributions</i>	5	5		
	<i>Operating surplus/Miscellaneous income, net</i>	1	1		
Logging					
<i>Production account</i>	<i>Output at basic prices</i>	2 623	2527	84	12
	Market output	2 490	2399	79	12
	Income on sales of wood		1891	79	12
	Cutting and short haulage services		452		
	Other income		56		
	Own-account production	133	128	5	0
	Firewood	60	60		
	Land and other major improvements	73	68	5	0
	<i>Intermediate consumption at purchaser' prices</i>	397	378	17	2
	Intermediate consumption of acquisition work	66	66		
	Maintenance of forest roads	31	31		
	Other intermediate consumption	300	281	17	2
	<i>Value added gross, at basic prices</i>	2 623	2 527	67	10
	<i>Consumption of fixed capital</i>	433	430	2	1
	<i>Value added net, at basic prices</i>	2 190	2 097	65	9
<i>Generation of income account</i>	<i>Wages and salaries</i>	148		9	1
	<i>Employers' social contributions</i>	37		2	0
	<i>Operating surplus/Miscellaneous income, net</i>	2 005	2097	54	8
Other forestry					
<i>Production account</i>	<i>Output at basic prices</i>	19			
	Market output	19			
	Income on sales of wood				
	Cutting and short haulage services				
	Other income				
	Own-account production	0			
	<i>Intermediate consumption at purchaser' prices</i>	8			
	<i>Value added gross, at basic prices</i>	19			
	<i>Consumption of fixed capital</i>	8			
<i>Value added net, at basic prices</i>	11				
<i>Generation of income account</i>	<i>Wages and salaries</i>	0			
	<i>Employers' social contributions</i>	0			
	<i>Operating surplus/Miscellaneous income, net</i>	11			
Activities serving forestry					
<i>Production account</i>	<i>Output at basic prices</i>	230			
	Market output	230			
	Own-account production	0			

	<i>Intermediate consumption at purchaser' prices</i>	183		
	<i>Value added gross, at basic prices</i>	47		
	<i>Consumption of fixed capital</i>	5		
	<i>Value added net, at basic prices</i>	42		
<i>Generation of income account</i>	<i>Wages and salaries</i>	87		
	<i>Employers' social contributions</i>	22		
	<i>Other subsidies on production</i>	4		
	<i>Operating surplus/Miscellaneous income, net</i>	-63		
Forestry and related services				
<i>Production account</i>	<i>Output at basic prices</i>	2 931	2835	84 12
	<i>Intermediate consumption at purchaser' prices</i>	612	593	17 2
	<i>Value added gross, at basic prices</i>	2 319	2242	67 10
	<i>Consumption of fixed capital</i>	458	455	2 1
	<i>Value added net, at basic prices</i>	1 861	1787	65 9
<i>Generation of income account</i>	<i>Wages and salaries</i>	252	242	9 1
	<i>Employers' social contributions</i>	64	62	2 0
	<i>Other subsidies on production</i>	4	4	
	<i>Operating surplus/Miscellaneous income, net</i>	1 549	1487	54 8

3.8. Fishing (B)

Professional coastal and inland water fishing, fish farming and part-time and spare-time fishing are considered to belong to the fishing industry (SIC95 05010 and 05020).

Professional and part-time fishing and fish farming are market output of market producers, in which no sector is defined.

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

1. Professional fishing in ocean and coastal waters
2. Professional fishing in inland waters
3. Part-time angling
4. Fishery fees
5. 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 (Pekka Rytönen Oy).

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)

Mining and quarrying include the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas). Extraction can be by underground or surface mining or well operation.

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)

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 industry, 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 industry, whose content and concepts satisfactorily meet accounting needs, has become the most crucial data source for national accounts estimates.

3.10.1.1. Structural Business Statistics on manufacturing

Target population

The annual structural business statistics on manufacturing are what is termed total survey. The target population contains about 28 000 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 18 % of manufacturing establishments are part of the survey (termed a direct questionnaire sample). The sample covers roughly 94 % of production value and 89 % 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 the 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 is used for manufacturing statistics of

businesses not included in the direct questionnaire. 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) has to be estimated mathematically (imputed).

Firms 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 concern. 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 classification differs from the method used in the business register: all establishments from which data are obtained are classified under their main industry. Thus management activities of holding companies and head offices of production enterprises are 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 identify and register the branch of activity of the companies and establishments not included in the direct survey.

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 unincorporated power stations and waterworks with a staff of less than 20 persons is obtained annually from local government financial statistics. Other unincorporated local and central government enterprises classed as manufacturing with staffs of less than 20 are not within the scope of calculation, being of less significance. The public enterprise register in preparation will probably correct this.

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 1997 statistical year were: the number of full-time equivalent personnel had to exceed 0,5 man-years or the turnover amount had to exceed FIM 50 000. 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). MAVA data covers adequately companies operating for only part of the year.

What is termed the hidden economy is not separately valued for manufacturing activity in national accounts estimates. Research indicates that its bearing on industry is relatively minor, according to tax auditing statistics roughly FIM 200 million. In addition, the level of industrial activity may be slightly overestimated because small industrial companies are entirely classified to industry even in cases where they have non-industrial activities. According to the business register, non-industrial turnover of such companies exceeded FIM

500 million, chiefly in the trade sector. The level of output of trade in national accounts estimates is determined according to establishment statistics in the business register and any establishments also involved in manufacturing are not removed from it. This duplication balances the likely hidden economy, even though the distribution among activity branches within manufacturing may be incorrect.

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 is to be found in structural business statistics by kind of current

assets: fuel, 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 manufacturing. 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 purchase price from 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. Contrary to earlier practice, 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 are not treated as profit on production activity.

Data on turnover of the manufacturing establishments of small non-industrial companies and small enterprises not included in structural business statistics are to be found in the business register and the VAT register. Data on turnover of local government unincorporated power stations and waterworks are to be found in the statistics on the finances of municipalities. The level of output on all industrial activity is calculated by adding these two items to the output based on structural business statistics.

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.
- 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 manufacturing, which is carried out in other establishments of the same enterprise or in establishments of other enterprises using the employee establishment's raw materials and semi-finished products.
- 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 and other current assets) 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) 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 method is not applied to the item "Other Current Assets". Instead, changes in inventories are in accordance with the concept of price in structural business statistics.

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, is presumed to include rents for intangible rights which are not part of intermediate consumption.

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 got 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 data bases, if the data bases will be used for longer than a year. Part of the historic cost 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, this item

is fully deductible from intermediate consumption. It accounts for roughly 85 % of all computer software investments in manufacturing. The method is not quite accurate from the viewpoint of the size of the deduction and the industry allocation.

The intermediate consumption of small manufacturing establishments of non-industrial enterprises and the omitted small enterprises is calculated by means of structural business statistics data. The proportion of intermediate consumption to output for these companies is the same as that calculated in structural business statistics described above. The calculations are made at the five digit level of industrial classification. The intermediate consumption of local government unincorporated power stations and waterworks is calculated from the statistics on the finances of municipalities. The intermediate consumption level of all industrial activity is obtained by summing up the three items of intermediate consumption.

3.11. Electricity, gas and water supply (E)

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)

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 SIC2000 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 unit. 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 self-built 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 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 general government and households as well. Self-built construction of buildings is treated as household 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, *inter alia* 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.

3.12.1.3. Calculation by economic activity

Output

Construction of buildings output 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 13. Determining construction of buildings output

VOLUME OF NEW CONSTRUCTION	PRICE DATA	VOLUME OF RENOVATION	
<p>Building supervisory authorities of municipalities</p> <ul style="list-style-type: none"> * New construction and extensions * Delay 7 weeks <p>Data content (includes)</p> <ul style="list-style-type: none"> * Purpose of building * Investors (Owner category) * Volume of building (cubic metre) * Standard classifications * Number of floors * Construction method 	<p>Construction of buildings cost data</p> <ul style="list-style-type: none"> * (Haahtela Kehitys Oy) <p>Data content (includes)</p> <ul style="list-style-type: none"> * Purpose of building * Volume of building (cubic metre) * Number of floors * standard classification * Prices by region * Construction method 	<p>Statistics Finland</p> <ul style="list-style-type: none"> * Economic trends of enterprises * Labour Force Survey work hours <p>Data content</p> <ul style="list-style-type: none"> * Volume of renovation * Commercial renovation 	
↓	↓	↓	↓
OUTPUT OF NEW CONSTRUCTION AT BASIC PRICES		OUTPUT OF RENOVATION AT BASIC PRICES	
<ul style="list-style-type: none"> * At current and constant prices * Includes developer's profit margin * 14 Owner category --> sector division * Own-account/commercial new construction * 14 Purpose of building --> dwelling/other new construction 		<ul style="list-style-type: none"> * At current and constant prices * Includes developer's profit margin * Commercial renovation 	

The output at basic prices is calculated at producer's prices. The developer's cost, which includes the design, insurance and financing fees for the building, is not included in construction of buildings output at producers' prices.

New construction

The value of newly constructed non-residential buildings and other buildings at current prices are got from Statistics Finland's building construction statistics (cf. Table). 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 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 14: Output of Construction of complete buildings and parts thereof , million

2000	Dwellings	Non-residential buildings	All construction of buildings	
New construction	3 955	3 695	7 650	
Renovation	3 375	2 146	5 521	
Yearly repairs	1 649	995	2 644	
Refurbishment	1 726	1 151	2 877	
Total	7 330	5 841	13 171	

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 State Technical Research Centre (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 bases on REMO2000 that includes an estimate of both type of renovation.

In conjunction with the reform of supply and use tables, the level of renovation was revised for the years 1995-2000. Renovation volume index produced by Statistics Finland's Prices and Wages –unit was used for the annual change in the volume of all renovation. The renovation volume index is based on hours worked on Labour Force Survey.

The development of commercial renovation is illustrated by the volume index of renovation. There is no data on the development of own-account renovation. Consequently, the volume of commercial renovation is applied to household renovation. The level of renovation of municipalities is determined by means of municipal economic statistics. The price of new construction of buildings is used as the price of renovation.

Despite level adjustments and what are more developed renovation volume index, the divisions (into renovation of dwellings and non-residential buildings a on the one hand, and into yearly repairs and refurbishment of dwellings and non-residential buildings on the other) are still not soundly based. Some information on dwellings is available (Household Budget Surveys, financial statement data of housing corporations, etc., special reports) but nothing about non-residential buildings. The data is scattered and incomplete. Calculation figures are based partially on estimates.

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 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. financing leasing), other rents and other expenses. The value of intermediate consumption is determined as through level of output and output-intermediate consumption ratio.

Table 15: Output of construction of buildings, intermediate consumption and value added by sector in 2000, million

	P1	P11	P12	P2	B1G
Non-financial corporations	10 564	10 561	3	6 687	3 877
Households	2 579	1 364	1 215	1 469	1 110
Entrepreneurs	469	469		238	232
Own-account construction	1 704	489	1 215	1 130	574
Hidden	406	406		102	305
Local government	172	62	110	86	86
Total	13 315	11 987	1 328	8 242	5 073

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 2000, 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 producers for own final use construction is used as the hourly wage. Output is calculated as in producers for own final use 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 self-managed 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 producers for own final use 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 production, the value added share of output is 35%. The output of producers for own final use 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 and Business Register . The extent of foundation work related to construction of buildings is estimated on the basis of Statistics Finland's building construction data.

Government commercial accounts are the data source for central government civil engineering construction. 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.

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, central government finances and local government finances.

3.12.2.3. Calculation by economic activity

Output by sector

S111S14N Non-financial corporations

Output

The output of non-financial corporations 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 of 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 1-2 million euros.

Intermediate consumption

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

S1311 General government

Output and intermediate consumption

Civil engineering by general government finances is recorded as producer type 'T30 Other non-market producers'. The source for calculations is central government commercial accounts.

In national commercial accounts, two industries in the government's charge query civil engineering output: track development and road development. In the former case, central government, i.e. the Railway Administration Centre (RHK) purchases maintenance and construction services from the VR Group (known earlier as Finnish Railways) and certain other non-financial corporations, so that this portion of output is included in market production figures. Road development and new construction (intermediate consumption and investments) until 2000 was both purchased and performed through public works undertakings.

Data on revenue and expenditure of the Road Administration (TL) are obtained from central government accounting, but road development or civil engineering, for example, entail no exact allocation in respect of intermediate consumption and compensation of employees. Compensation of employees, i.e. wages and employers' social contributions, paid by the Road Administration (Accounts office 453) are calculated in general terms and divided between production (SIC 4502) and administration (SIC 6302) according to their respective share in the budget allocation table. The intermediate consumption of the Road Administration is divided between road development and civil engineering, assisted by data in central government commercial accounts. Purchases (Commercial account 4302) made of civil engineering repair and maintenance services are recorded *inter alia* in the road development industry's intermediate consumption, while purchases of Road Administration services other than repair and maintenance are included in civil engineering. Intermediate consumption recorded in other commercial accounts is, according to the definition of each account, allocated to one or other industry so that material procurement and equipment rentals are in the civil engineering industry, and rent of premises is in the road development industry. Finally, the total of the value-added tax paid on inputs, to be found in central government commercial accounts, is added to intermediate consumption of industries. By adding employee contributions (wages and employers' social contributions) by industry and fixed capital consumption obtained from the capital stock model, value added by industry at basic prices is obtained. Output by industry at basic prices is obtained by adding intermediate consumption at purchasers' prices by industry to added value.

Operational road development is the responsibility of the Finnish Road Administration, and civil engineering as such is the responsibility of its production department (earlier called Road Districts). The Finnish Road Administration's production activities were hived off at the start of 2001 to the Finnish Road Enterprise, an unincorporated state enterprise which acts in the enterprise sector of the national accounts as a market producer in the civil engineering industry (Industry 4502). country's national highways are administered by the Finnish Road Administration, which procures the new construction, repair and maintenance services required from non-state sector tenderers of services. The Finnish Road Administration is classified in the national accounts as an Other non-market producer belonging to the state sector

and operating in the road development industry (Industry 6302). Since 2001, public works is no longer involved in civil engineering industry production.

A similar problem arises when calculating investments in civil engineering and road development as arose with compensation of employees and intermediate consumption: the data in central government commercial accounts yield the investments made by the Finnish Road Administration only in general terms and does not split them into administration and production as such. When the Finnish Road Administration was divided into the Finnish Road Administration and the Finnish Road Enterprise in 2001, some of the former Road Administration's property was conveyed to the Finnish Road Enterprise by a so-called administrative transfer. Investments made earlier (1975-2000) by the Road Administration were then divided between road development and civil engineering in the same proportion as property was divided between the Finnish Road Administration and the Finnish Road Enterprise at the start of 2001, for it may be assumed that property transferred to the Road Utility was in fact the property needed in production activities, and which was procured for civil engineering production. Divided in this way, the Road Administration's investments were split between the road development (industry 6303) and civil engineering (industry 4502) industries as follows:

ECONOMIC ACTIVITY	SIC 6302	SIC 4502
P5122	32 %	68 %
P5111	80 %	20 %
P51121	81 %	19 %
P51122	100 %	0 %
P51131	0 %	100 %
P51132	34 %	66 %

The table shows that all investments in civil engineering and most of those in residential and non-residential construction of buildings are allocated to industry Road development (industry 6303). All investments in transport equipment and most of those in machines, equipment and software are allocated to the civil engineering industry.

To the Road Administration's investments is added the value-added tax paid on investment goods to be found in general government commercial accounts, the total of which is also to be found in the same accounting data.

Annual consumption of fixed capital is obtained from the capital stock model both by industry and by sector and is described in more detail in Section 4.12.

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 exist in civil engineering output also 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 16. Output, intermediate consumption and value added in Civil engineering by sector in 2000, in millions of euro

	P1	P11	P12	P139	P13	P2	B1G
Non-financial corporations	2 937	2 936	1	0	0	1 800	1 137
Central government	357	54	0	0	303	203	154
Local government	650	185	110	124	231	427	223
Total	3 944	3 175	111	124	534	2 430	1 514

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 only in the non-financial corporations sector. This production is recorded under producer type "T10 Market producers" and transaction 'P11 Market output'.

The main data sources for calculations are the Statistics Finland's business register, structural business statistics and the Labour Force Survey.

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 17. Output, intermediate consumption and value added in Construction services activities in 2000, in millions of euro

	P1	P11	P2	B1G
Non-financial corporations	165	165	68	97

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

3.13.1. Industry designation

In the new system of accounts, the wholesale and retail trade is divided into five subindustries instead of the three used earlier. This makes the compiling of national income estimates easier because in the new 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- 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 SIC95 Standard Industry Classification, this category includes three-digit level industries as follows:

501 Sale of motor vehicles
 503 Sale of motor vehicle parts and accessories
 504 Sale, maintenance and repair 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 SIC95 Standard Industry Classification.

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 SIC95 Standard Industry 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 SIC95 Standard Industry 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, Labour Force Survey and different indices, including the level-of-earnings index and the consumer price index.

One of the key aims in the reform of national accounting has been the critical and systematic review of sources and methods. The reliability and exhaustiveness of source materials have been crucial to this reform. In recent years, a radical renewal has taken place in many key fundamental statistics from the standpoint of national income estimates. The chief aim was to provide reliable, exhaustive and consistent basic material to users both as to classifications and definitions.

The business register is used to determine national income estimates in the trade sector, including those for output, intermediate consumption, value added levels and wage and salary levels.

From statistical year 1994, the tax administration's business income tax data has been a new data source for structural business statistics about trade. However, surveys sent directly to non-financial corporations still remain the main data source for structural business statistics. Data about non-financial corporations not surveyed are obtained in the tax administration's business income tax data, supplemented with data from the business register. The structural business statistics on trade industries have been exhaustive aggregate data since statistical year 1994.

The direct survey applying to the structural business statistics for statistical year 1996 was sent to all non-financial corporations employing more than 10 persons in the trade sector. Data on smaller non-financial corporations were based on business income tax and business register data, while incomplete and unreturned survey data were filled out by the same means.

Sales statistics for trade

Sales statistics for trade were changed from the start of 1998 to comply with Council Regulation (EEC) No 2186/93 on short-term business statistics and Eurostat recommendations. The industry's classification was changed to the SIC95 standard classification of industry, based on NACE Rev. 1. The statistical base year was also changed from the start of the year so that 1995=100. In addition, new price indices in accordance with the COICOP Classification were adopted for retail trade.

Amounts in (Finnish) marks are omitted from the reformed statistics and data are shown only as indices. Sales and turnover data denominated in marks by industry will be precise and exhaustive after a half year's delay, when value added tax data will be completed and revised. In keeping with the nature of the trade cycle, the focus in statistics will be on the reliable estimating of a change in sales.

Sales data are still gathered directly from enterprises, but are also drawn from data on payment controls of value-added tax and employers' contributions. The biggest companies by turnover from each industry in Finland are selected for the survey and roughly 600 trade sector companies take part in the direct survey.

Direct collection data, in addition to data supplied by tax authorities, are necessary for two reasons. First, the tax data are not available to Statistics Finland sufficiently soon to meet the timetable restrictions of the European Union's short-term statistics regulation. Second, quality standards demand the settlement of the key secondary activities of the biggest conglomerates for the sake of industry clarity. Focusing on big companies ensures that most of the turnover by industry will support advance estimates to be calculated in their regard.

In the context of sales statistics, a change has been effected from establishment statistics to enterprise statistics. This statistical unit change has both advantages and drawbacks. The advantage is that the change has made it feasible to avail of the tax administration's data, which lowers the response burden on enterprises and facilitates the compilation of fully exhaustive trade cycle statistics.

The drawback is that statistical purity by branch of activity may suffer. Each enterprise is classified in Statistics Finland's business register by its main industry. Individual enterprises may operate in more than one industry. This may lead to the allocation of excessive turnover to one industry to which it does not belong while it is omitted from another. The clarification of secondary activities mentioned above alleviates this problem. Another drawback is that business adjustments cause more problems in relation to timely benchmarking of statistics. Direct collection data are designed to be easily benchmarked with the tax administration data so that they can be used to supplement and revise tax data. In the matter of projected estimates, one can speak strictly of turnover development in the biggest companies on the basis of direct surveys.

Direct survey data permit quick estimates to be made of sales development levels overall and for certain key industry levels, which then become more precise based on the tax administration's data. The classification of industries for both industry classification from direct survey and the tax administration's data is based on the SIC95 Standard Industrial Classification. Distribution of industry statistics, supplemented by the tax administration's data, is as follows:

50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel

- 0.1 Sale of motor vehicles
- 0.2 Retail sale of automotive fuel

51 Wholesale trade and commission trade, except motor vehicles and motorcycles

- 1.1 Commission trade
- 1.2 Wholesale trade of agricultural raw materials and live animals
- 1.3 Wholesale trade of nutrients and stimulants
- 1.4 Wholesale trade of household goods
- 1.5 Wholesale trade of non-agricultural intermediate products, waste and scrap

- 1.6 Wholesale trade of machinery, equipment and supplies
- 1.7 General wholesale
 - including other wholesale

52 Retail trade, except motor vehicles

- 2.1 Retail trade of non-specialised foodstuffs
- 2.2 Retail trade of specialised foodstuffs
- 2.3 Retail sale of alcoholic and other beverages
- 2.4 Department stores
- 2.5 Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles
- 2.6 Retail sale of textiles and apparel
- 2.7 Retail sale of footwear and leather goods
- 2.8 Retail sale of furniture, lighting equipment and household articles n.e.c
- 2.9 Retail sale of electrical household appliances, electronic entertainment and music goods
- 2.10 Retail sale of hardware, paints and glass
- 2.11 Retail sale of books, newspapers and stationery
- 2.12 Retail sale in the field of photography
- 2.13 Retail sale in the field of optics
- 2.14 Retail sale of goldsmith art work, clocks and watches
- 2.15 Retail sale in the field of sports, boats and boating equipment
- 2.16 Retail sale of computer and telecommunications equipment and office machines
- 2.17 Other retail sale
- 2.18 Retail sale via mail order houses
- 2.19 Retail sale in outdoor markets and marts and of used goods in stores.

The relevance of trade statistics in compiling the annual national accounts becomes clearer, especially when projecting advance figures. In keeping with the nature of the trade cycle, trade statistics are available to investigators sooner than a couple of other key statistics: the Business Register and structural business statistics on 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

The output of trade industries is what is termed the trade margin, or commission on trade, the difference between the buying price paid and the price at which it is sold.

When compiling the final accounting figures, two key basic statistics are available: the business register and the structural business statistics. Both statistics have undergone the renewal process applying to classifications and exhaustiveness. They are exhaustive aggregate data based on direct surveys conducted of enterprises and establishments and on the tax administration's database.

The unit in structural business statistics is the **enterprise**. Statistics Finland's business register collects data both by **enterprise** (in the business register) and by **establishment** (in the establishment register). The **structure** of national income estimates is to be found in structural business statistics (e.g. the percentage of output in turnover) and the **levels** are to be found in the business register (turnover and wage and salary levels) with the establishment as the unit. The so-called business statistics approach is used in national income estimates in the trade sector, which the EU Gross National Income Committee decided to recommend as a more feasible calculation method in trade industries. The method will become obvious from the ensuing explanation.

Output

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

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, other output from business activities and change in inventories are all added to turnover, in accordance with structural business statistics. Goods for resale purchased in the financial period are deducted.

In other return on business activities, capital gains from the sale of fixed assets are distinguished from other return of a more permanent kind, such as rental income. Capital gains on sales of fixed assets do not count as output because they do not comply with the national accounting concept of income. Separating them from other return on business activities is awkward because methods of recording rental income and capital gains on sales of fixed assets in financial statement data can vary greatly between enterprises. Starting in statistical year 1998, the capital gains on sales of fixed assets in structural business statistics have been separated from other operating income (See the enterprise statistics questionnaire applying to Hotels and restaurants). Hence, an accurate, adjusted figure applying to other operating costs is obtained for the national accounts.

National income estimates for trade are produced at the three-digit level and aggregated at the two-digit level. The relative share proper to output in turnover is determined by means of structural business statistics. The level of output in the national accounts is determined from turnover in the three-digit establishment register by using the ratio to be found in structural business statistics. Exact as this calculation method may be, it leads to discrepancies in totals (at the two-digit level) because turnover levels in the establishment

register and structural business statistics may vary a lot at the three-digit level due to different statistical units employed in these two exhaustive statistics. In the establishment register, the unit is the establishment and in structural business statistics, it is the enterprise.

The trading of oil and oil products, which is not counted as part of Finland's GDP, was deducted from the turnover of wholesale trade (Industry 51). The explanation for this is that the foreign subsidiaries of the Finnish oil company buy and sell oil products without such products ever passing through Finland. In addition, the wholesale output was raised FIM 397 million in a one time operation in 1995. This was due to an inventory reimbursement paid to Avena Oy (the former national grain store) on the accession of Finland to the European Union. 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 estimates of output in repair industries start 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. Other return on business activities is rectified using the same methods as in the trade industries.

During the course of reform, the way in which management establishments and management companies were treated in national accounts industries and sectors was standardised in accordance with ESA 1995. Because the level of return is calculated using the establishment register, neither head offices of enterprises nor those of management businesses in trade are included in the trade industry. Instead, they belong to Industry 74150 (Management companies). Head offices of management businesses are also not included in the calculation of intermediate consumption.

All in all, turnover in the trade sector increased in 1996 by some FIM 240 million due to management companies. They increased the total output of trade by FIM 50 million.

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 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 – 5 %. The possible value of the hidden economy in proportion to total retail sales came to between FIM 1.4 – 7.0 billion in 1995. Value added came to roughly FIM 140–170 million. These figures do not include undisclosed repairs of motor vehicles, household appliances and the like, which could raise estimates of the hidden economy by a few million marks.

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.

The trade sector amounted to 17 % of this, or FIM 126 million. Additions to the income of an enterprise are one of the tax administration auditing office's key sources, as far as the national accounts are concerned. Hidden income can reduce the output of trade sector industries and thereby reduce value added. Undisclosed income of employees or hidden dividend distributions to owner entrepreneur, which are part of the value added of the industry, are not as problematic for Finland's national accounts as concealed income. The reason is that the GDP level is determined by the production method (Output – Intermediate Consumption), which permits an industry's value added to be calculated, once its output level and share of intermediate consumption are known.

The firm of Pekka Rytönen Oy Consultants, has made estimates of the possible size of hidden income and its influence on output on the basis of the tax administration's auditing data. Income concealed in the calculation of the tax audit (additions to the income of the enterprise) is correlated by branch of activity to the turnover of the audited cases. Multiplying the share of turnover for any concealed income in the audited cases by the turnover data for the population of the equivalent industries results in the so-called imputed starting value of the industry as a whole. These values produce too high an estimate for undisclosed income since the majority of enterprises manage their affairs without reproach. It is presumed that the real undisclosed income, or missing turnover, of an industry is closer to 20–40 % of the starting value of undisclosed income.

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. According to the estimates made by Pekka Rytönen Oy Consultants, imputed concealed income in the trade sector stood at between FIM 222–444 million in 1997, according to tax administration auditing. This would have come to roughly 0.3–0.6 % of output in the trade sector in 1996.

Research into tax auditing data clearly indicates that the hidden economy stands at a fairly modest level in the trade sector. Against that, the population used by Pekka Rytönen Oy Consultants, includes only small trade sector enterprises. By omitting mid-sized and large enterprises from the fundamental set, hidden economy activity in these enterprises also remains unquantified.

In the reform of national accounting, the trade output was raised by FIM 1 500 million from the level at which it stood in 1996, based on the official establishment register. The value added amounts to 500 million marks. This can be interpreted as the hidden economy augmenting the official level. The margin seems to reflect roughly estimates put forward for the hidden economy in the trade sector. A further starting point was the concept of the possible underrepresentation of turnover in the trade sector from the establishment register. It is not necessarily a question of hidden economy, but also of improving exhaustiveness (turnover, wages and salaries) in the trade sector.

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 above is a fairly general estimate of the hidden economy. National income estimates of the hidden economy will become more precise with improving data. This will also be supported by even wider utilisation of many materials (Labour Force Survey, sideline/overtime work done by employees, income distribution statistics, tax auditing materials, etc.).

Intermediate consumption

Intermediate consumption of trade (a proportional share of output) 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. Staff costs may contain some intermediate consumption items also, such as staff training and recreation expenses. Evaluating these items is difficult because final accounting practices among businesses vary considerably in relation to how training and other staff related expenses are recorded in accounts. Such items may include in non-wage labour costs and miscellaneous expenses. In order to calculate compulsory social contributions out of wages and salaries, precise percentages (portions of wages and salaries) are agreed each year. These compulsory contributions are then compared to non-wage labour costs for the industry. Deducting compulsory social contributions from non-wage labour costs leaves "Voluntary social contributions and other non-wage labour costs" (related to intermediate consumption). The percentage data in the Statistics Finland publication "Labour Force Costs in the Private Sector" are used in order to calculate voluntary social contributions, and other staff costs relating to intermediate consumption come out as the residual. The share of other staff costs in 1996 was roughly 0.3 % of output in wholesale (Industry 51), or FIM 120 million.

In repair and maintenance industries (Industry 502 and 527) the calculation of intermediate consumption differs from other trade industries. In these two industries intermediate consumption includes both goods for resale purchased as well as change in inventories. Increase in the change in inventories reduces the intermediate consumption.

Calculation of intermediate consumption follows the same principles as calculation of output. The proportional share of intermediate consumption output is calculated, in accordance with structural business statistics, at the standard industry classification three-digit level. This three-digit level percentage is applied to output as calculated from the level in the establishment register. Intermediate consumption is calculated at exactly the standard industrial classification three-digit level and is aggregated, or added up, at the two-digit level (e.g. at the level of the entire wholesale trade). After aggregation, intermediate consumption is adjusted in two ways. First, financial leasing, which cannot be included in intermediate consumption of trade, is deducted. Financial leasing in the wholesale and retail trade (Industry G) amounted to FIM 248 million in 1996. Since no accurate distribution by industry was in use, financial leasing was divided roughly in proportion to turnover. In the trade sector, the lion's share of financial leasing went to the wholesale and commission trade (Industry 51) to the tune of roughly FIM 146 million. The share of financial leasing in the sale and repair of motor vehicles remained at FIM 37 million and in retail sales at FIM 64 million.

The second item deducted from intermediate consumption is computer software. Roughly FIM 400 million was spent on computer software in the trade sector, i.e. intermediate consumption was reduced and investments increased by this amount.

3.14. Hotels and restaurants (H)

3.14.1. Designating the industry

Hotel and restaurant activities are divided into two subindustries.

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 in accordance with the SIC95 Standard Industry Classification:

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 in accordance with the SIC95 Standard Industry Classification:

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, the consumer index and the pocket statistics compiled by the Finnish Hotel and Restaurant Association (SHRL).

The Business Register is used to determine national income estimates in the hotels and restaurants sector, including those of output, intermediate consumption, value added levels and wage and salary levels.

Statistics Finland's structural business statistics are drawn up annually by branch of activity on the basis of the profit and loss account and balance sheet data of enterprises. The statistical unit is the independent enterprise. The direct survey applying to structural business statistics of the hotels and restaurants industry for statistical year 1996 was sent to all enterprises employing more than 20 staff in this sector. Data on smaller enterprises were based on business income tax and business register data. Incomplete and unreturned survey data were filled out by the same means.

Hotels and restaurants sector pocket statistics

The hotels and restaurants sector pocket statistics are compiled by the Finnish Hotel and Restaurant Association (SHRL), which is the umbrella organisation of the hotels and restaurants sector. It speaks for over 90% of enterprises in the sector.

The pocket statistics avail of many data sources and collects independent data about the sector. The statistics reflect the number and development of establishments, distribution of licences to sell beverages and restaurants sales by proprietor group, accommodation capacity and occupancy rates, total sales by industry, sales of restaurants with licences to sell beverages, overnight stays in registered lodgings, price trends, cost structure by branch of activity, developments in productivity, employment and wage levels, number of full-time staff by occupation employed in restaurants with licences to sell beverages, average hourly rates of wages and salaries for regular work and consumer spending by household. Cost structures are analysed separately by industry for restaurants with licences to sell beverages, and hotels and coffee bars. The relative share of assets used, labour costs, miscellaneous costs, operating income, depreciation and trading profit are calculated.

The hotels and restaurants sector pocket statistics are based partly on aggregate data and partly on samples. Data applying to the cost structure are based on the latter. The pocket statistics are reliable with respect to hotels and restaurants because the Finnish Hotel and Restaurant Association covers almost the entire business. The sampling fraction of the pocket statistics is low for the turnover of coffee bars and small restaurants with licences to sell beverages. All in all, their role in compiling national accounts figures for hotels and restaurants has diminished. The reason is that most of the facts are based on data from Statistics Finland, e.g. statistics on tourism. Most of the data is available directly from Statistics Finland.

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.

The unit in structural business statistics is the **enterprise**. Statistics Finland's Business Register collects data both by **enterprise** (in the business register) and by **establishment** (in the establishment register). The **structure** of national income estimates for the hotels and restaurants sector is to be found in structural business statistics (intermediate consumption percentage of turnover/output) and the **levels** are to be found in the Business Register (turnover and wage and salary levels) with the establishment as the unit. The so-called business statistics approach is used in national income estimates in the hotels and restaurants sector.

Output

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

Calculations of output in the hotels and restaurants sector start 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**.

In other profits on business activities, capital gains on sales of fixed assets are differentiated from other return of a more permanent kind, such as rental

income. Capital gains on sales of fixed assets do not count as output because they do not comply with the national accounts concept of income. Separating them from other return on business activities is awkward because methods of recording rental income and capital gains on sales of fixed assets in financial statement data can vary greatly between enterprises. Starting in statistical year 1998, the capital gains on sales of fixed assets in structural business statistics have been separated from other operating income (See the enterprise statistics questionnaire applying to hotels and restaurants). Hence, an accurate, adjusted figure applying to other operating costs is obtained for the national accounts.

Estimates for hotels and restaurant activities are made at the three-digit level and aggregated at the two-digit level. The relative share of output to turnover is defined by means of structural business statistics. The level of output in the national accounts is defined from turnover in the three-digit establishment register using the ratio to be found in structural business statistics. Accurate as this calculation method may be, it leads to discrepancies in totals (at the two-digit level) because the turnover levels in the establishment register and structural business statistics may vary a lot from each other at the three-digit level, due to the different statistical units employed in these two exhaustive statistics. For the establishment register, the basic unit is the establishment and for structural business statistics, it is the enterprise.

During the course of reform, the way in which management establishments and management companies were treated in industries and sectors for the national accounts was standardised in accordance with ESA 1995. Because the levels of return are calculated through the establishment register, neither the head offices of enterprises nor those of management businesses in the hotels and restaurants sector are included. Instead, they belong to Industry 74150 (Management companies). Head offices of management businesses are also not included in the calculation of intermediate consumption.

All in all, turnover in the hotels and restaurants sector increased by some FIM 36 million in 1995 due to management establishments. They increased the total output by a corresponding figure and increased wages and salaries in the hotels and restaurants sector in 1995 by FIM 8 million.

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. The hotels and restaurants sector amounted to some 8 % of this, or FIM 58 million.

The share of output attributed to concealed income is high in certain sectors of hotel and restaurant activities (small and medium-sized premises with Grade III strength beer licences). Bypassing the cash desk is easy in such industries because most of the customers are private individuals. According to estimates by Pekka Rytönen Oy Consultants, imputed concealed income in the hotels and restaurants sector in 1997 were between FIM 369-739 million according to tax administration auditing. In 1996, this would have amounted to roughly 1.7–3.4 % of output in the sector.

Statistics Finland's Labour Force Survey defines employment levels in the national accounts. This survey and through it the employment level in the national accounts contain at least some hidden economy employment. A comprehensive employment level will raise wage and salary levels above those in the establishment register. The wage and salary level can be deduced by multiplying the number of employees 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, the raised wage and salary levels will increase value added and output.

The above is a fairly general estimate for evaluating the hidden economy in the national accounts. Further clarifications are needed by wider utilisation of different materials: the Labour Force Survey, secondary/overtime work by employees, income distribution statistics, tax auditing materials, etc.

Intermediate consumption

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, however, figures for which are obtained from the sector investigator responsible for the financial institution sector), other rents (excluding rents for civil engineering) and other fixed and variable expenses. Staff costs may include some intermediate consumption items also, such as staff training and recreation expenses. Evaluating these items is difficult because final accounting practices among businesses vary considerably in relation to how training and other staff related expenses are recorded in accounts. Such items may include in non-wage labour costs and miscellaneous expenses. In order to calculate compulsory social contributions out of wages and salaries, precise percentages (portions of wages and salaries) are agreed each year. These compulsory contributions are then compared to non-wage labour costs for the industry. Deducting compulsory social contributions from non-wage labour costs leaves "Voluntary social contributions and other non-wage labour costs" (related to intermediate consumption). The percentage data in the Statistics Finland publication "Labour Force Costs in the Private Sector" are used in order to calculate voluntary social contributions, and other staff costs relating to intermediate consumption come out as the residual.

Calculation of intermediate consumption follows the same principles as calculation of output. Intermediate consumption's proportional share of output is calculated, in accordance with structural business statistics, at the standard industry classification's three-digit level. This three-digit level percentage is applied to output as calculated from the level in the establishment register. Intermediate consumption is calculated at the standard industrial classification three-digit level and is aggregated or added up, at the two-digit or at the aggregated three-digit level (e.g. at the entire accommodation activities level: Industry 551 and 552 are added). After aggregation, intermediate consumption is adjusted in two ways. Financial leasing, which cannot be counted in intermediate consumption, is first deducted. Financial leasing in the hotels and restaurants sector (Industry H) amounted to FIM 46 million in 1996. Since no exact breakdown by industry was employed, financial leasing is broken down roughly in the proportion of turnover to leasing rents. For lodgings activities, financial leasing (Industry 551) was roughly FIM 14 million. The share of financial leasing in restaurant activities remained at FIM 32 million. The undivided item for financial leasing in the whole hotels and restaurants branch is obtained from the sector investigator in charge of financial institutions.

The second item to be deducted from intermediate consumption is that of computer software. Software investments include purchased applications, databases purchased as a service or self-built; software produced on own account and system design and set up; design and set-up of information systems purchased as a service from data processing services businesses; consulting and

training supplied as part of the acquisition and installation of systems. Computer programme investments were cleared centrally for the time series 1975-1999.

Computer programme investments for each industry are found by adding up the items "Production for own use" and "Separately purchased software". The software investment calculator broke down conversion for own use among industries. There is fairly precise data by industry available. Production for own use is added to industry investments. In addition, in the market production producer type (to which hotel and restaurant activities belong) production for own final use is *deducted* from market output and *added* to output for own final use.

No accurate information by industry has been found for separately purchased software. Sector investigators must each allocate the software to the exact industry. Separately purchased software is deducted from intermediate consumption for the industry and added to investments.

3.15. *Transport, storage and communication (I)*

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 risen at the same time from just over 11% to 17%, 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 establishment.

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 18: Aggregate calculations for transport and communications by industry

PRODUCTION, WAGES AND SALARIES AND EMPLOYMENT 1997	Establish-ments	Output (FIM mill.)	Wages and salaries (FIM mill.)	Total employed	Employees	Self-employed persons
I. Transport, storage and communications	24 187	94 545	18 463	164 619	142 000	22 019
IA. Transport and storage	23 727	73 664	12 959	118 163	96 575	21 588
60 Land transport; transport via pipelines	20 981	30 325	6 341	74 754	53 973	20 781
601 Rail transport	3	3 874	1 414	10 243	10 243	
602+603 Other land transport and transport via pipelines	20979	26451	4927	64 511	43 730	20 781
6021 Bus, tram and underground train transport	480					
60211 Tram and underground train transport	2					
60212 Scheduled bus transport	369					
60231 Non-scheduled bus transport	109					
6022 Taxi transport	8 381					
60220 Taxi transport	8 361					
60239 Other land passenger trans.	20					
6024 Freight transport by road	12 116					
60300 Transport via pipelines	1					
61 Water transport	353	8 389	1 749	10 935	10 674	261
61100 Sea and coastal water trans.	239					
61200 Inland water transport	114					
620 Air transport	128	7 614	1 190	5 883	5 866	17
62100 Scheduled air transport	63					
62200 Non-scheduled air transport	65					
63 Supporting and auxiliary transport activities	2 265	27 336	3 679	26 591	26 062	529
6301 Railway development	1	1 659	18	100	100	
6302 Road development	3	8 830	328	3 000	3 000	
6303 Supporting air transport activities	26	1 034	319	1 958	1 944	14
6309 Other supporting and auxiliary transport activities	2 235	15 813	3 014	21 533	21 018	515
6310 Cargo handling and storage	340	2 839	888	5 932	5 857	75
63110 Cargo handling	176					
6312 0 Storage and warehousing	164					
6321 Supporting land transport activities	385	2 144	346	3 067	2 962	105
63211 Bus stations	83					
63212 Road transport terminals	102					

63213 Paid parking	51					
63219 Other supporting land transport activities	66					
6322 Supporting water transport activities	90	2 161	560	3 301	3 277	24
63221 Harbours	52					
63229 Other supporting water transport activities	38					
6330 Activities of travel agencies	738	6 251	498	4 232	4 049	183
6340 Activities of other transport agencies	682	2 418	722	5 001	4 873	128
63401 Forwarding and freighting	444					
63409 Other transport agency services	238					
IB. Post and telecommunications	460	20 881	5 504	45 856	45 425	431
641 Post and courier activities	264	6 704	2 992	28 389	27 997	392
64110 National post activities	2					
64120 Courier activities other than national post activities	262					
642 Telecommunications	196	14 177	2 512	17 467	17 428	39
64201 Telephone communications	62					
64202 Other telecommunications	92					
64203 Programme transmission services	42					

3.15.1. Main data sources and calculation method

The basic framework for calculating market output, wage and salary levels and employment levels is the business register (YTR) published annually by Statistics Finland. The statistical unit denotes, except for certain exceptions, the establishment, and economic activities denote turnover, wages and salaries, and number of staff.

Because Business Register do 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 control 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 data collected in the register 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 traffic companies, municipal harbour authorities and strategic stockpiling as part of storage operations 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 from such sources reduces the actual output of the industry – and hence the worth of added value – while payments of undeclared earnings and the omission of disguised dividends distort the components of added value.

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 tax administration 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, there is a tendency to estimate the development of hidden income when needed not just by tax audits but also based on contribution margin calculations proper to vehicles that have been raised using the vehicle stock and supposed concealed employment. The yearly corrections have been made using the number of taxis, average income (coverage margin) per vehicle compared to other data like Business Register. The level of hidden income is estimated on this base for taxis. The hidden production of trucks is based on separate study and the yearly level is decided by comparing the number of trucks to information of Business Register and SBS and the average/coverage margin per truck.

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 19: Output by calculation item (market production) 1997, FIM mill.

Transport, storage and communications	
Output at basic prices	82 997.4
Output for own final use	67.0

Market output	82 930.4
Freight transport by land	21 447.2
Passenger transport by land	8 852.5
Freight transport by water	5 373.2
Passenger transport by water	3 015.4
Freight transport by air	638.3
Scheduled passenger transport by air	5 798.5
Non-scheduled passenger air transport	641.4
Other air transport activities r	535.5
Cargo handling and storage	2 839.0
Ancillary land transport activities	2 144.2
Ancillary water transport activities	1 103.8
Ancillary air transport activities	992.7
Travel agencies	6 250.7
Activities of other transport agencies	2 417.7
Letter and parcel t delivery t	3 946.7
Other postal services l	730.0
Newspaper delivery	1 210.8
Other distribution and courier activities	8 15.8
Local telephone activities	3 249.9
Long distance telephone activities	449.0
International telephone activities	1 092.7
Mobile communications	4 900.0
Data transmission	1 115.8
Program transmission	113.7
Other non-voice services	3 255.9

Transportation consist in addition to passenger and freight transport also 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 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 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 (in the forestry, metal and chemical industries) characterised by heavy loads and long distances. Railway transport amount 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 level of calculation items also includes 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 roughly 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 1997, roughly 27 000 trucks and 3 000 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. The activities of natural gas distribution companies and the manufacture and distribution of other substances (oil transmission, city gas, etc.) belong to their proper industries.

The output of pipeline transport is calculated by multiplying the total volume of natural gas sold by a distribution margin amounting to the difference between the unit price of sales and imports.

3.15.2.2. *Water transport*

Water transport covers sea, coastal and inland water transport, including floating of logs. Vessel transport services related to piloting, lighthouses and shipping lanes belongs to public services of supporting water transport activities.

The establishment in shipping transport is defined as all vessels belonging to the Finnish mercant fleet which, contrary to the professional principles of 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 used only for floating. Establishments for the floating of logs by forest industry enterprises are treated as forest industry.

Road ferries, shipping lane and rescue vessels and icebreakers are not part of the Finnish mercant fleet. Their activities are treated as a part of supporting transport activities. Fishing vessels, being a part of fishing activities, remain outside transport also. The Finnish mercant fleet numbered roughly 600 vessels at the end of 1997.

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 level of tanker transport in coastal waters 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 (measured in tonnes per kilometre) by a unit cost index, which is weighted by the amounts the wood is floated. In other respects, calculations are based on business income tax data.

3.15.2.3. *Air transport*

Air transport covers transport activities of Finnish airlines in scheduled and non-scheduled flight activities commercial pilots. The output of air transport is

calculated not only on the transport itself, but on the leasing of aircraft, sales to travellers on board and sales of goods and services to other airline companies, with the exception of services sold by repair shops to third parties which are 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. Output on traveller sales is calculated from the trading margin. The value of the bought goods is deducted from sales, based on data obtained from Finnair.

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 (IL), 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 travel agencies and other tourist assistance activities cover the production of package, charter and group tours by travel agencies, 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 travel agencies in which purchases of transport, accommodation and guide services needed for own-account production is 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 the Post Finland 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. As a result of competition, a group of new, independent telecom operators, focusing mainly on GSM telephones, entered the market one of whom, Telia Oy, a service operator, has applied for a permit to build its own separate mobile phone network.

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 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 20: Calculation items in intermediate consumption by main industry 1997, FIM million.

Calculation items	I.	60	61	62	63	641	642
	Transport & storage	Land transpo rt	Water transpo rt	Air transpo rt	Activities ancillary to transport	Postal transport	Telecom- munication s
Materials & supplies	6 851.9	4 733.3	635.8	997.6	485.1	115.2	1 495.1
Rents	3 447.0	557.2	1 790.0	416.0	683.8	827.7	459.9
External services	12 236.5	2 821.2	1 904.2	1 894.7	5 616.4	373.7	2 394.3
Misc. operating expenses	4 027.9	1 494.2	381.0	804.4	1 348.2	248.0	1 131.7
Int. consumpt. at purch. prices	26 563.3	9 606.0	4 711.0	4 112.8	8 133.5	1 564.7	5 481.0

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 including 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 are 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 the demand items intermediate consumption and investments are recorded in the road maintenance industry of joint municipal authorities as a rule. This industry also includes road wear.

Purchases made for roads and streets maintained by joint municipal authorities (including wages and salary costs but less a nominal return on sales) are recorded in Industry 6302 Road development in **intermediate consumption**. The wear on roads and streets maintained by local government is recorded as this industry's capital consumption.

When local government production is calculated by expenditure, consumption of fixed capital is recorded as **value added** and consumption and intermediate consumption combined are recorded as **output**. Computer software produced as own-account work for local government maintenance and investment activities is recorded in economic transactions as **output for own final use (P12)**. **Other non-market output** consists of the difference between output and own final use.

The sources used for intermediate consumption are financial statistics of municipalities (Part II, Table 01) function category Traffic routes (460) and the financial statement data of the Government of Åland. Physical depreciation is obtained from the capital stock model. The value of computer software produced as own-account work (output for own final use) is to be found in centralised accounting in the national accounts.

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 (STY). Consumption of fixed capital is obtained from the capital stock model.

3.16. Insurance and financial intermediation (J)

3.16.1. Financial intermediation (65)

The industry includes the following activities: banking: banking activities, the central bank, deposit banks and other banking related activities; other financial intermediation : financial leasing, financial institution and investment activities.

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 after the publication of its financial statement. Statistics Finland's credit institution statistics provide data applying to commercial banks, co-operative banks, savings banks and other credit institutions (financing companies, mortgage credit institutions and credit companies). Banking in Finland is controlled by Financial Supervision (Rahoitustarkastus).

Investment funds data for other financial institutions are to be found in Statistics Finland's investment fund statistics. For some financial institutions, it is necessary to rely on further inquiries, if such funds are not part of traditional banking practice.

3.16.1.2. Calculation method

Output consists of three components: market output, financial intermediation services indirectly measured (FISIM) and own-account output (EDP software). 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). Indirect financial services consist of interest margins of banks stemming from the difference between deposit and lending rates. FISIM is calculated as interest income less interest costs. Interest incomes and costs are obtained directly from credit institution statistics and from the Bank of Finland's financial statement.

If the FISIM regulation enters into force, it will mean that the central bank will not provide intermediate financial services and its output will be estimated through expenditure. For the present, the output of central bank is calculated in the same way as other financial intermediation .

Intermediate consumption is based on the breakdown of various operating costs which, for commercial banks, are got from banking statistics and, for the Bank of Finland, from the breakdowns of its financial statement. Taken from banking statistics and counted as intermediate consumption are other administrative costs (= management charges, less wages and salaries and non-wage labour costs), commission fees, property costs and an estimate of rentals of buildings . For other financial institutions, the sources of data are the operating costs available at the breakdown level from profit and loss statements.

Table 21. Key items in production account, 2000.

Total output	4 802
- Market output	1 512
- Output for own final use	123
- Intermediate financial services	3 167
Intermediate consumption	1 296

Value added	3 506
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3.16.2. *Financial intermediation services indirectly measured (FISIM)*

Financial Intermediation Services Indirectly Measured, FISIM, is shown in this industry as intermediate consumption and consequently industry value added is negative. The size of the item is equal to the output on financial intermediation in the industry.

The data sources are the interest margins and interest costs found in the financial statement of the Bank of Finland. Where other banks are concerned, there are the banking statistics of Statistics Finland and for other institutions engaged in financial intermediation, interest margins and expenses in the profit and loss account.

Intermediate financial services consist of the interest margins of banks, which stem from the difference between deposits and lending. The interest margin is the difference between interest income and interest costs.

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 Insurance Centre (LVK), the Insurance Association against Treatment Injury (PVY) and the Pharmaceutical Preparation Damage Pool (LVVP). 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 (VVV), 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 (t+1) and covers all insurance companies and insurance associations with the exception of few smaller units mentioned above for which financial statements are available. VVV also collects data on pension funds and foundations.

The Federation of Finnish Insurance Companies also collects data, which is available at the start of the year. This material covers only Finnish insurance companies and excludes foreign companies operating in Finland and insurance associations.

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.

Output

Insurance output projection table (projections for all lines of insurance, in 2000):

	euro, in mill.
Premiums written (+)	6 297
Change in provision for unearned premiums (-)	3 002
Claims paid (-)	3 350
Claims management expenses (+)	173
Change in provision for outstanding claims (-)	432
Investment income, net (+)	1 677
Investment operating expenses (+)	34
Income from investment of own funds (-)	177
Output, total	1 220

Premiums, claims and provisions are obtained directly from the insurance technical account. The figures include reinsurance.

The net yield on investments is to be found in the breakdown of investment activity in the profit and loss account data. Dividends, interest and other profit are counted as output, but sales profit and revaluation of assets (i.e. capital gains) are not. The corresponding investment expenses are deducted. The income from investment of own funds is also deducted from net profit and is obtained using the following formula:

$(\text{Shareholders' equity in balance sheet} / \text{Balance sheet total}) \times (\text{Investment income, net} + \text{Investment operating expenses})$.

Paid claims and investment costs in the insurance technical account include management expenses mainly consisting of wages and salaries. For this reason, claims management expenses and investment operating expenses are added to adjust output.

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.

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 whom 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

Statistics Finland's Investment firms statistics (includes asset management and stockbroker firms). Statistic Finland's Mutual fund statistics (includes mutual fund management firms). Annual report of Helsinki Stock Exchange. Insurance Supervision Authority's statistics of Insurance Brokers.

Annual reports are used for dealers and organisations serving credit institutions and insurance companies.

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 got 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 businessactivities (K)

3.17.1. Real estate activities with own property (701)

The industry consists of the SIC95 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 activity 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 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 estate 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.

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's data.

Production by sector

S111 Non-financial corporations

Output

Output from the **development and selling of real estate (SIC 7011)** is calculated in two parts. Output from new construction is obtained from the difference between from pre-tax investment prices and production at producers' 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 from between 14.3-12.5% for residential construction to between 15.4-13.9% for non-residential construction for the years 1995-1999.

Developer costs related to renovation work are calculated from renovation values in the construction of buildings industry at producers' 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 (SIC 7012)** at basic prices is equal to the combined turnover of the places of establishment file in the business register. Industry enterprises 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 (SIC 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 development and selling of real estate also (SIC 7011). The production is local government secondary production of other industries and so 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 22. Output, intermediate consumption and value added of Industry 701 "Real estate activities with own property" in 2000, million

	P1	P11	P12	P2	B1G
Non-financial corporations	1 251	1 251	0	858	393
SIC 7011	1 008	1 008	0	691	316
SIC 7012	243	243	0	167	76
General government	210	0	210	144	66

Local government	169	0	169	116	53
Total	2 880	2 501	379	1 976	904

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 2000, owner-occupied dwellings amounted to roughly 74% 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 letting statistics, housing stock and Household Budget Survey statistics.

Letting 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. Letting statistics are compiled annually from surveys and register research. In 2002, the rental statistics contained 191 53 dwellings, for example, the data on 181 920 of which were to be found in the Social Insurance Institution's housing allowance register. Dwellings whose occupants (roughly 550 000) do not receive housing allowances were divided into three strata from each of which a representative sample was taken, as follows.

* A sample of 5 334 dwellings was selected from State-subsidised rental dwellings, 2 647 of which became part of the statistics (49.6 % response rate)

* A sample of 7 994 dwellings was selected from commercially financed rental dwellings let for the first time, of which 2 848 became part of the statistics(35.6 % response rate).

* A sample of 8 987 dwellings was selected from commercially financed rental dwellings already let (let before 1.4.2001) of which 3 738 became part of the statistics (41.6 % response rate).

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, basis of entitlement, 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 registration 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 production of other industries and, hence, is not recorded separately in the production of Industry 7021 ' Letting and operation of dwellings'.

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, was 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 housing stock and rent are classified according to the following variables:

1. House type: detached small house (single-family house), attached houses and apartment building (includes housing type "Other housing").
2. Title to occupancy: owner-occupied dwelling, commercially financed rental dwelling, State-subsidised (includes other title to occupancy, including company-owned and right-to-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
 - * Apartment buildings
 - * Rents for 19 cities/areas to be found in rent statistics
 - * 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
 - * Apartment buildings
 - * 1, 2, 3 rooms or more

Only one price per square metre is used for Åland dwelling stock. The data is supplied by the Åland Office for Statistics and Analysis (Ålands statistik- och utredningsbyrå).

As far as apartment buildings 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

apartment blocks, rents of Other rental dwellings are used. The master data is 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. Gross rents for dwellings according to the classification method totalled just over 13.6 billion euros in 2000. The imputed value of gross rents totalled almost 9.8 billion euros, and actual rents totalled roughly 3.9 billion euros.

As a general conclusion the new stratification method produces a slightly smaller output level than the old method.

Table 23 A: Effect of a calculation method change in primary and secondary output of dwellings (industry “7021 Letting and operation of dwellings” excl. holiday homes) in 1995-2001, millions of euros at current prices

Dwellings	1995	1996	1997	1998	1999	2000	2001
old level	10 210	10 794	11 684	12 363	13 019	13 845	14 660
new level	10 079	10 668	11 578	12 168	12 905	13 642	14 445
new vs. old	-131	-126	-105	-195	-113	-204	-215

Table 23: Number, floor area and gross income (output) of dwellings in 2000.

Form of occupancy	Dwellings, total	%	Floor area thousands of sq. m.	%	Gross rent, € million	%
Total	2 271 410	100,0	177 747	100,0	13 717	100,0
Rented dwellings	822 943	36.2	46 571	26.2	3 946	28.8
Owner-occupied dwellings	1 448 467	63.8	131 176	73.8	9 771	71.2

Table 24. Output, intermediate consumption and value added Letting and operation of dwellings in 2000, million

	P1	P11	P12	P2	B1G
Principal production	13 879	3 748	10 131	4 190	9 689
Non-financial corporations	719	719	0	247	472

Housing corporations	1 108	1 108	0	398	710
Employment pension institutions	8	8	0	2	6
Households	11 793	1 662	10 131	3 458	8 335
Non-profit institutions serving households	251	251	0	85	166
Secondary production	312	312	0	110	201
Financial & insurance institutions	91	91	0	31	61
Central government	18	18	0	7	11
Municipalities	202	202	0	73	130
Total	14 191	4 060	10 131	4 300	9 890

Change in the quality of output is estimated by means of changes in value and prices. In 1998, for example, the value of the industry's output (P1) at current prices increased according to stratification calculations by 5.8 % and prices by 3.4 %. The annual change in volume as a residual of changes in value and price was 2.3 %, of which the annual change in the floor area of the dwelling stock covered 1.5 % – the remaining 0.8 % was considered to be variation in quality.

As basis for estimating variation in the quality of output, use can be made of the fact that the annual increase in rent from rent statistics used for the change in price is meant to illustrate price changes for rental dwellings that are as like 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.

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. Output for rental cottages or market output consists of rent, interest and ground rent (cf. Table).

Table 25: Output, intermediate consumption and value added of holiday homes, in 2000, million

	P1	P11	P12	P2	B1G
Holiday homes, total	474	114	360	187	288
Households	417	57	360	148	269
Enterprises	57	57	0	39	19

In conjunction with compiling supply and use tables, consumption of fixed capital was added to the output of holiday homes (In output for own final use). Deterioration of holiday homes is estimated as a share of consumption of fixed capital for the entire industry (Dwellings and holiday homes). The deterioration value is based on floor area and the estimated investment cost per square metre. In 2000, the estimated investment cost of holiday homes per square metre was

roughly 75 % of the value of investment in residential buildings. Furthermore, the equipment level of the holiday home stock (electricity, water supply and drainage) was considered to be so insufficient that holiday home floor areas were estimated at roughly 30 % of the value of those in residential buildings.

Calculation of the output of holiday homes will in time be calculated by means of the dwelling output model. Corresponding square metre area data for holiday homes are available. The problem mainly involves deciding the rent per square metre.

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 cost 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/euro per household by 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 statistical data 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 consumer surveys.

Intermediate consumption: holiday homes

Intermediate consumption is calculated from the following consumer 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 SIC95 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 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.

Output by sectors

S111 Non-financial corporations

Output

The output of enterprises 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, the Real Estate Institute's commercial and office space leasing data 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 was use for comparison purposes.

Non-financial corporations 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 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.

S1311 Central government

Output

Until 1998, central government covered the output of the State Real Property Agency (Valtion Kiinteistölaitos) for industry '7022 Letting and operation of real estate'. Data were to be found in central government accounting. Central government production was recorded as producer type 'T10 Market producers'. Output was coupled with economic activity 'P11 Market output'. Central government accounting is the source for these calculations.

The State Real Property Agency became an unincorporated state enterprise in 1999 and its name was changed to Senate Properties (Senaattikiinteistöt). The production of Senate Properties is recorded in the non-financial corporations sector since 1999.

Intermediate consumption

General government intermediate consumption was also established from data in government commercial accounting.

**Table 26. Output, intermediate consumption and value added
Letting and operation of real estate in 2000, million**

	P1	P11	P12	P2	B1G
Non-financial corporations	1 811	1 810	1	792	1 019

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.

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.

The only production of the industry is in the sector 'S111 Non-financial corporations'. They belong to producer type 'T10 Market producers'. Production is recorded as economic activity 'P11 Market output'.

**Table 27. Output, intermediate consumption and value added
of real estate agencies at current prices in 2000, million**

	P1	P11	P2	B1G
Non-financial corporations	389	389	163	226

Intermediate consumption

Intermediate consumption is calculated as a share of production using Structural Business Statistics, the Business Register and profit and loss 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 janitors.

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.

Production by sector

S111 Non-financial corporations

Output

Output consists of the output from Non-financial corporations 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.

The production of Non-financial corporations is recorded as producer type "T10 Market. The output is recorded as economic activity 'P11 Market output'.

Intermediate consumption

Intermediate consumption for **Non-financial corporations** 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 inventory, 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 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 proprietor 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 proprietor sectors. The proprietor sector choice was influenced by the fact that it is desirable that households should not become employers. The industry itself was defined according to the nature of caretaker activities. The change in methodology itself didn't have an impact to 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 28. Output, intermediate consumption and value added of real estate management/administration in 2000, million

	P1	P11	P2	B1G
Total	1 046	1 046	435	611
Non-financial corporations	777	777	333	444
Housing corporations	106	106	0	106
Central government	163	163	102	61

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 SIC95. 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 and economic advisory services; management 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)
- Investigative, security and guard services (746)
- Industrial cleaning services (747)
- Miscellaneous business activities n.e.c. (748)

In the national accounts, the accounting unit for business services is the establishment. In 1998, over 32 000 establishments operated in the business services industry. In numerical terms, most (about 11 000) were in the legal and economic consulting industry. The majority of Non-financial corporations (about 90%) are single-establishment Non-financial corporations.

3.17.6.1. *Main data sources*

The main data sources for industries are Business Register data and structural business statistics. If the former do not exist, company specific structural business statistics data are used. 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.

Data sources are adjusted in the case of some industries. The first such industry is Management companies (74150). Industry definitions of management companies differ in the business register and in structural business statistics. In the business register management companies and their establishment are treated under Industry 74150. In structural business statistics, management companies having a production role in group activities are placed in the industry proper to the group. Management companies not exercising such a role are placed in Industry 74150. In the national accounts, management companies and management establishments are treated in accordance with structural business statistics. Consequently, business services are calculated by extracting from Industry 74150 the management establishments which relate to production and adding them to the industry proper to production in each case.

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 method

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. Market output comprises the turnover of the establishment, additions to stocks of finished goods and other output from business activities. Turnover is got from establishment data in the business register. Advertising services are an exception. In their case, business register turnover is equivalent to gross profit, due to which industry turnover is determined by applying structural business statistics turnover data. Additions to finished goods and other output from business services are also derived from structural business statistics. The share of production belonging to the hidden economy has been determined on the basis of the survey by Pekka Rytönen Oy, Consultants. Output for own use includes computer software.

Intermediate consumption

Data on intermediate consumption are not found directly from the business register and are calculated by means of structural business statistics instead. For this purpose, the following components are first added: purchases during the financial period less inventory purchases, external services, rental expenses less payments for financial leasing, and other fixed and variable expenses. Software investments are deducted from the sum obtained and intermediate consumption is what remains.

Financial leasing is found at the level of main Industry K only from a centralised financial leasing estimate. The division into subindustries is performed in relation to structural business statistics leasing rentals.

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: Real estate leasing and management (7022), Research and development (73), Technical services, 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 acts also 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 State Real Property Agency (Senaattikiinteistöt) and the defence administration's construction utility are now treated as market producers in that the calculations are now made from the top down, so to speak. The market output of the units 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)

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 well over 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% with a few years.

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 Housing Fund of Finland, the State Pensions 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 TV and Radio Fund. Unincorporated state enterprises belong to the enterprise sector. Examples of unincorporated state enterprises are: Senate Properties, established in 1999 (formerly known as the State Real Property Agency), and the Finnish Institute of Public Management (HK). Also belonging to the enterprise sector are companies over which the government has partial or full control.

Central government production is divided among 15 accounting industries: 4502 Civil engineering; 6301 Railway development; 6302 Road development; 6309 Other supporting transport activities; 7022 Letting and operation of real estate; 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.

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 (RHK), road development consists mainly of the Road Administration's administrative activities and other auxiliary transport activities consist of the Finnish Maritime (MKL). 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 included 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 State Technical Research Centre (VTT), the Finnish Forest Research Institute (METLA), the Agricultural Research Institute (MTK), the Geological Survey of Finland (GTL), the National Public Health Institute (KTL) and the Academy of Finland (SA). The key technical service agencies belonging to the industry are the National Land Survey of Finland (MML) and Radiation and Nuclear Safety Authority (STK). Miscellaneous business services mainly involve the Ministry of Labour's Employment and Economic Development Centres' employment departments (TE-keskukset).

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 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 (cf. Chapter 11). In assessing employment levels, government employee data from the Research Institute on 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 industries 7022 and 7032, from the top down, because these industries have 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 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, are 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 29. Central government production/generation-of-income accounts by industry, 2000

Production account	4502	6301	6302	6309	7032	73	742
Output at basic prices	357	363	777	228	163	685	153
Market output	54	63	3	102	163	123	54
Output for own final use	0	0	0	0	0	6	1
Sales of non-market products	0	0	0	0		0	22
Other non-market output	303	300	774	126		556	76
Intermediate consumption at purchasers' prices	203	189	164	72	105	249	50
<i>Value added, gross at basic prices</i>	<i>154</i>	<i>174</i>	<i>613</i>	<i>156</i>	<i>58</i>	<i>436</i>	<i>103</i>
Consumption of fixed capital	14	169	551	73	0	48	7
<i>Added value, net at basic prices</i>	<i>140</i>	<i>5</i>	<i>62</i>	<i>83</i>	<i>58</i>	<i>388</i>	<i>96</i>
Generation-of-income account							
Wages and salaries	108	4	49	65	33	315	77
Employers' social contributions	32	1	13	18	8	73	19
<i>Operating surplus/mixed income, net</i>					17		

Production account	748	751	752	80	851	853	92
Output at basic prices	120	4446	684	1706	40	18	54
Market output	6	402	0	224	28	11	6
Output for own final use	0	15	0	13	0	0	0
Sales of non-market products	0	53	0	0	0	0	0
Other non-market output	114	3976	684	1469	12	7	48
Intermediate consumption at purchasers' prices	33	1669	602	580	7	8	27
<i>Value added, gross at basic prices</i>	<i>87</i>	<i>2777</i>	<i>82</i>	<i>1126</i>	<i>33</i>	<i>10</i>	<i>27</i>
Consumption of fixed capital	3	266	0	164	12	1	9
<i>Added value, net at basic prices</i>	<i>84</i>	<i>2511</i>	<i>82</i>	<i>962</i>	<i>21</i>	<i>9</i>	<i>18</i>
Generation-of-income account							
Wages and salaries	66	1968	82	777	17	7	14
Employers' social contributions	18	543	0	185	4	2	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 (KL) and the Commission for Local Authority Employers (KT). 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, and their utilities are counted in the enterprise 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 (SIC95). 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: Road development (6302), General government finances (751), Education (80), Health and social work (85), Sewage & refuse disposal, sanitation and similar activities (90), and Recreational, cultural and sporting activities (92). Logging (0212) is a market producer, and other industries are Other non-market producers. Municipalities and joint municipal authorities are involved in industries Construction of buildings (4501), Development (701) and Ownership of dwellings (7021). Due to the insufficiency of source data, no separate production accounts are calculated for these industries. Instead, they are included as ancillary production in the industries of other local government sectors.

The local government share of value added in Finland's GDP was 12.4 % in 2000. Correspondingly, its share of final consumption expenditure amounted to 61.3 %. Municipalities and joint municipal authorities produce almost all of Finland's educational, health care and social services (cf. Table 30).

Table 30: Share of value added of local government industries compared to that of aggregate national accounts, in 2000.

Industry:	Local government share of value added:
0212 Logging	2.2 %
4502 Civil engineering	8.1 %
6302 Road development	28.9 %
751 General government finances	44.7 %
80 Education	65.1 %
851 Health activities	79.6 %
852 Veterinary activities	31.1 %
853 Social work activities	78.3 %
92 Recreational, cultural & sporting activities	33.8 %
Municipal institutions, industries total	12.4 % 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 2000, there was a total of 452 municipalities, 246 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 & 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, P131 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 (P131). 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 reflect central government final consumption expenditure (in P3K sector accounts).

Next, calculation solutions for production accounts will be described according to economic activity: Industries 751 Public administration, 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 benefit 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 client 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 (circulation, 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 are 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 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 are shown. 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, 0212 Logging is a market producer. 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 0212 Logging 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.

Table 31: Local government production and generation of income by industry in 2000, million

Transaction/ Industry	0212	4502	6302	751	80	851	852	853	90	92	Total
P1R Output at basic price	77	540	252	4041	4745	5911	27	3561	126	966	20246
P11R Market output	72	185		1391	232	467	9	302	7	84	2749
P12R Output for own final use	5			59	61	33		22	1	16	197
P139R Sales of non-market products		124		153	61	464	2	533	90	61	1488
P13R Other non-market output		231	252	2438	4391	4947	16	2704	28	805	15812
P2K Intermediate consumption at purchasers' prices	17	427		1798	1163	1729	13	666	76	314	6203
B1GPH Gross value added at basic prices	60	113	252	2243	3582	4182	14	2895	50	652	14043
K1K Consumption of fixed capital	3	2	252	364	408	308		163	4	148	1652
D1K Compensation of employees	11	111		1878	3174	3874	14	2732	13	504	12311
D11K Wages and salaries	9	83		1439	2497	2967	9	2073	10	386	9473
D12K Employers' social contributions	2	28		439	677	907	5	659	3	118	2838
D29K Other taxes on production				1					33		34
D39R Other subsidies on production											
B13N Operatin surplus/mixed income	46										30
D631K Social benefits in kind				5	32	110		598		7	752

3.18.3 Social security funds

3.18.3.1 Employee 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 insurance, compulsory for all employers, is found in the compulsory social security industry as part of non-market production. In the sector classification, it belongs to the general government subsector under social security funds. There are several employment insurance systems: TEL (Employees' Pensions Act) for private sector employee pensions, LEL (Short-term Employees' Pensions Act), TaEl (Artists and Workers in Other Particular Groups Pensions Act), MEL (Seamen's Pensions Act), MyEL (Agricultural Entrepreneurs' Pensions Act), YEL (Entrepreneurs' Pensions Act), KvTEL (Local Authority Employees' Pensions Act), VEL (State Employees' Pensions Act) and KiEL (Evangelical Lutheran Church Pensions Act). Excepting the State Employees' Pension Fund, the bodies looking after such employee pensions are independent institutions. The State Employees' Pension Fund is a fund lacking independence found under the State sector. Besides compulsory statutory insurance, some systems offer a small degree of voluntary additional pension cover.

While they are many, each pension systems manages its own section of the labour force's compulsory pension cover and does not overlap. The system can be seen as collective, covering the entire population. The size of pension cover as a whole and of employee pension contributions are decided by collective agreement. The Finnish employee pension system operates mainly as a distributive system, the degree of funding being less than 20 %. The central body of the employee pension system, the Central Pension Security Institute, offers advisory information, carries out research and maintains an employment relationship register based on which earned employee pensions are calculated.

Premium income in 1998 (FIM mill.):

TEL Employees' Pension Act	32 100
LEL Short-term Employees' Pension Act	2 155
TaEL Artists and Workers in Other Particular Groups Pension Act	293
MEL Seamen's Pension Act	285
MyEL Agricultural Entrepreneurs' Pension Act	832
KvTEL Local Authority Employees' Pension Act	12 493

The employee pension system in Finland is well supervised and regulated with information being readily available. The "Insurance Companies", published annually by the Insurance Supervisory Authority (VTV) in the Official Statistics of Finland series, contains data on 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. Federation of Finnish Insurance Companies publishes a summary of financial statement data of pension insurance companies in May each year.

Output in the industry is calculated through expenditure. It is the combined total of value added (compensation of employees plus consumption of fixed capital) and intermediate consumption.

Compensation of employees is calculated by summing wages, salaries and social security contributions from the profit and loss account. Intermediate consumption consists of other operating expenses in the profit and loss account.

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 (KELA)
- The Unemployment Funds (TYKA)
- The Unemployment Insurance Fund (TVR)
- The Training and Redundancy Payment 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.
- Burial and Redundancy Assistance 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

	1997	1998	1999
Total expenditure, FIM billions	54.1	55.5	55.2
Operating expenses/Total costs, %	2.9	3.0	3
Benefit expenditure per person, marks per year	10200	10300	10400
Staff numbers	5718	5718	5778

Benefits paid by Soc. Insurance Institution, FIM mill.

	1997	1998	1999
National pensions and disability benefits	18 468	17 758	17 181
Sickness insurance benefits	10 579	10 919	11 506
Rehabilitation benefits	1 062	1 140	1 234
Unemployment benefits	6 140	6 242	6 368
Children's allowances	10 501	10 748	10 649
Financial aid for studies	3 464	3 611	3 622
Housing allowances	2 122	2 559	2 891
Other benefits	133	75	78
Total expenditure on benefits	52 470	53 049	53 529

Unemployment Funds are bodies corporate 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 Training and Redundancy Payment Fund pays employees redundancy payments at the end of their employment relationships and pays for self-directed professional education. 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 156 such funds at the end of 1998. Funds paying supplemental benefits generally collect membership fees by which most of the benefits are financed. Employers may also participate in the expenses.

Burial and redundancy assistance funds are insurance funds whose members are usually employees of particular employers or persons belonging to a particular profession. There were 11 such funds in 1998.

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 1998, there were 202 member funds in the association with roughly 230 000 members. Sickness funds numbered 170, pension funds 21 and burial and redundancy assistance 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 1998, KELA's share of the output of the "Other compulsory social security" industry was roughly 74%, the combined "Unemployment funds" and "Unemployment insurance fund" roughly 14 %, others roughly 12%.

KELA: financial statement, annual report, quarterly report and itemised surveys and the KELA statistical yearbook.

Unemployment Funds: statement of accounts compiled by the Ministry of Social Affairs and Health and other summaries of unemployment funds accounts.

Unemployment Insurance Fund: statement of accounts and Annual Report.

Training and Redundancy Payment Fund: statement of accounts and Annual Report.

Burial and redundancy assistance funds: statement of accounts for burial and redundancy funds accounting compiled by the Ministry of Social Affairs and Health.

Sickness Funds: statement of accounts for sickness funds accounting compiled by the Ministry of Social Affairs and Health.

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) in market production insurance activities is also counted in social security intermediate consumption. Namely, 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)

3.19.1. Market producers

There is market producer output in the Education (80) industry in Finland in the following subindustries: Driving school activities (80410), In-service training centres (80422), Language schools and centres (80423), Correspondence schools (80424) and Other educational institutions (80429). Private sector education is not widespread in Finland compared to public education and non-profit organisations.

The source used is data on establishments in the business register, the structural business statistics and the financial statistics of municipalities and joint municipal authorities. All sources are issued annually. 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 business register and structural business statistics. The remainder are aggregate statistics. 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 relied also on special reports by Pekka Rytönen Oy, Consultants, about hidden markets in the service sector and reports based on tax auditing data. The reports indicate that there are private teachers in the hidden economy who do not pay taxes on income and are not registered for preliminary tax withholding.

Output at basic prices equals the market output and own-account production total. Intermediate consumption 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 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. Since 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. Computer software produced on own account is output for own final use.

Intermediate consumption

In calculating intermediate consumption, the ratio between it in structural business statistics 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 and other variable and fixed costs. Intermediate consumption of local authority utilities is added to the intermediate consumption 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 inventory, rents and other operating costs. The number of separately purchased software investments is deducted from the intermediate consumption total of structural business statistics and local authority utilities.

Table 32: Output and intermediate consumption of market production in MNO industries in 2000, FIM mill.

Industry	80	851	852	853	90	911	92	9301	9309
Structural business statistics, business register	305	1 164	62	225	494	260	1 951	215	415
Municipal utilities	58				336				
Household Budget Survey, Product level adjustment		14		57					
Hidden economy	3	2					96		36
Market output, total	366	1 180	62	282	830	260	2 047	215	451
Own-account computer programme investments	5	2		1		13	10		
Original work investments							30		

Output for own final use, total	5	2		1		13	40		
Output at basic prices, total	371	1 182	62	283	830	273	2 087	215	451
Structural business statistics and business register	139	471	34	80	245	114	1 119	93	213
Municipal utilities	23				118				
Household Budget Survey, Product level adjustment				15					
Separately purchased software	-16	-31	-3		-5	-1	-40	-2	-4
Intermediate consumption by authors							3		
Intermediate consumption at purchasers' prices, total	146	440	31	93	358	113	1 082	91	209
Gross value added at basic prices	225	742	31	190	472	160	1 005	124	242

3.19.2. Non-market production: Central government

Calculation of this industry is explained in Section 3.18.1.

3.19.3. Non-market production: Local government

Calculation of this industry is explained in Section 3.18.2.

3.19.4. Non-market production: 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 activities 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 a State subsidy. The register contains the same data as in the profit and loss statements and balance sheets. The registers allows intermediate consumption for the entire industry to be evaluated very accurately.

3.20 Health and social work (N)

3.20.1. Market producers

The output of market producers of Human health activities (851) is found in the following industries: Hospital activities (85110), Other medical practice activities (85129), Dental practice activities (85130), Physiotherapy (85141), Laboratory and x-ray examinations (85142), Ambulance service (85143) and Other health care services (85149) e.g. chiropractors. In Finland, private health care services, like private educational services, are only a fraction of the number of public health care services.

Veterinary activities (852) comprises veterinary services, quarantine care and animal ambulance transport for farm animals and pets.

Market production of Social work activities (853) is found in Finland in Social work activities with accommodation (8531) and Social work activities without accommodation (8532). The former include Child and youth welfare institutions (85311), Institutions for the disabled (85312), Institutions for the elderly (85313), Institutions for alcoholics and drug abusers (85314), Service centres and residences (85315), Other institutions (85316) and Family welfare service (85317). The latter include Child day care (85321), Specialised day care and education for the disabled (85322), Home help services (85323), Sheltered work and rehabilitation (85324) and Other social work activities (85329). The production of private social activities is limited compared to that of public activities and non-profit activities.

Establishment data in the business register and data in structural business statistics are mostly used in health and social work calculations. They are aggregate sources and are published annually. The data are exhaustive and reliable as far as the aboveboard economy is concerned. In addition the data of Household Budget Surveys are used in calculation social work activities. The Household Budget Survey is a sample survey issued roughly every three years. Survey data are relied upon for day care childminder calculations by private families, as the latter are not listed in the business register or structural business statistics.

In order to ensure the exhaustiveness of industry estimates, the estimates relied also on special reports by Pekka Rytönen Oy, Consultants, about hidden markets in the services sector and reports based on tax auditing data. These reports maintain that a hidden economy exists in dental care and children's day care services.

The health and social work calculation method is the same as that of the education sector above i.e. the production account is calculated through output.

Output

Market 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 total additions to inventory, production for own use and other return on business activities is derived from structural business statistics. Sales profit is deducted from the latter. From this is got the coefficient in relation to turnover in structural business statistics. This coefficient is used to raise turnover in the business register to give the market output. To this concerning social work activities is added the market output of day care childminders found from Household Budget Survey data. The data include purchases for private family day care and other care system services. Computer software produced on own account is output for own final use.

For veterinary activities market output, turnover is found in the business register.

Intermediate consumption

When calculating intermediate consumption for human health activities and veterinary activities, the relationship between it and output according to

structural business statistics is utilised. Correspondingly, the same relationship is utilised for market output according to the business register, as calculated above. The following items were taken from structural business statistics into intermediate consumption: total purchases in the financial period (less inventory purchases), purchases of external services, rents and other variable and fixed expenses. The share of separately produced software is deducted from intermediate consumption.

In calculating intermediate consumption for social work activities, the proportion between intermediate consumption in structural business statistics and output in accordance with structural business statistics is utilised, as was the case with the human health activities above. Day care childminder intermediate consumption, for which Pekka Rytönen Oy, Consultants, prepared a special report (25% of output), is added to the intermediate consumption thus calculated).

3.20.2. Non-market producers: Central government

Calculation of this industry is explained in Section 3.18.1.

3.20.3. Non-market producers: 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), Recreational, cultural and sporting activities (92) and household service activities (95).

Common calculation features of these industries are shown here. The particular features of each industry are shown in conduction with each of the industries.

Value added

The earnings 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 organisation 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, as in the accompanying example. 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 applied also to any income and expense components.

Table 33. Example of intermediate consumption calculation in one particular large organisation, in FIM.

	1997	1998
+ Family policy, protection of law for children	339 000	493 000
+ Support of local voluntary activity	3 317 000	7 169 000
+ Services for families with children	35 179 000	36 179 000
+ Development activity	7 983 000	5 528 000
+ Development work and close co-operation	2 137 000	2 361 000
+ Information and events	2 147 000	2 289 000
+ Training, publishing and research activities	4 397 000	5 306 000
+ Organisational activities	2 907 000	3 195 000
+ Other ordinary activities	3 896 000	4 101 000
+ Fund raising	7 640 000	8 148 000
- Wages and salaries and employers' additional expenses	24 900 000	26 200 000
Total	45 042 000	48 569 000
Other organisations as described above		
Sample total	598 098 741	601 756 230
Sample share of wages and salaries for the entire Industry 851	58.7 %	60.5 %
Coefficient	1.70	1.65
Entire industry	1 019 422 540	995 123 758
Account figure, FIM mill.	1 019	995

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. Also, no intermediate consumption occurs for Industry 95, household service activities.

The source for research and development is the profit and loss statement of the 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 sample¹ is roughly 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 sample² 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 sample³, 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. It contains an abundance of financial statements.

The exhaustiveness of the sample in the health care services⁴ was roughly 60% and in the social services⁵ about 13%. The sample includes 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)

3.21.1. Market producers

Market output in other community, social and personal service activities consists of a great variety of activities.

Sewage and refuse disposal, sanitation and similar activities (90) consists of Treatment of liquid waste (90001), Treatment of solid waste (90002), Street

¹ The sample contains the following organisations: the Ships Officers Union, the Postal Clerks Association, the Confederation of Finnish Trade Unions (SAK), the Metalworkers Union, the Border Guards Union, the Ministry of Foreign Affairs Officers Association, the Union of Finnish Foresters, the Finnish Health Care Workers Federation (STHL), the Paper Workers Union, the Local Government Trade Union (KTV) and the Finnish Confederation of Salaried Employees (STTK).

² The sample contains the following organisations: the Left Alliance, the Finnish Communist Party, Social Democrat Youth, the Student Union of Helsinki University, the Student Union of Helsinki University of Technology, the Student Union of Joensuu University, the Student Union of Tampere University, the Sibelius Academy Student Union, the Student Union of Kuopio University, the Student Union of the Helsinki School of Economics and Business Administration and the Student Union of Vaasa University.

³ 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, the Conservative Work Archive Trust and Friends of the Pop & Jazz Conservatory.

⁴ The Finnish Red Cross, the Finnish Student Health Service, the National Association of the Disabled, the Finnish Rheumatism Foundation, the Disabled Soldiers Association, the Foundation for the Disabled and the Mannerheim Child Welfare Association.

⁵ The Rinnekoti Foundation, the Kannelkoti Foundation, Friends of the Young, the Finnish Mental Health Society, the A-Clinics Foundation and the Criminal Rehabilitation Association.

cleaning and other sanitation (90003) and Other sanitation and similar activities (90009). The private sector controls most of Finland's environmental management.

Activities of business and employers organisations (91110) and Activities of professional organisations (91120) belong to industry Activities of business, employers and professional organisations (911). The former comprise the activities of employer organisations, agricultural interest groups, organisations in various fields, chambers of commerce and copyright organisations.

The Recreational, cultural and sporting activities industry (92) is very varied. It includes Motion picture and video activities (921), Radio and television activities (922), Other entertainment activities (923), News agency activities (924), Library, archives, museums and other cultural activities (925), Sporting activities (926) and Other recreational activities (927), including Gambling and betting activities. Obviously, the most significant is radio and television activities and other recreational activities involving gambling and betting activities.

Washing and dry-cleaning of textile and fur products (9301) comprises all kinds of washing and dry-cleaning activities. Hairdressing and other beauty treatment (9302), Funeral and related activities (9303), Physical well-being activities (9304) and Service activities n.e.c. (9305) belong to Other personal service activities (9309). The industry's key sectors are hairdressing and undertaking activities.

3.21.1.1. Main data sources

The data sources used for environmental management are establishment data in the business register, data in the structural business statistics and data in the financial statistics of municipalities and joint municipal authorities. All sources appear annually. Data in local authority financial statistics are used in calculations because not all local authority utilities are yet included in the business register and structural business statistics. When calculating employment and labour input, the Labour Force Survey is used as well as the business register. Data sources are exhaustive and reliable as far as the aboveboard economy is concerned.

The business register is used as a basis for calculations in business and employers organisations with accident insurance statistics used as control data. The sources used for recreational, cultural and sporting activities are establishment data in the business register, data in structural business statistics and financial statement data from VEIKKAUS (Finnish Lottery Company) and RAY (Finland's Slot Machine Association).

For washing, dry-cleaning and other personal service activities, the sources are establishment data in the business register and data in structural business statistics.

In order to ensure the exhaustiveness of industry estimates, the estimates relied also on special reports by Pekka Rytönen Oy, Consultants, about hidden markets in the services sector and reports based on tax auditing data. These reports maintain that hidden economy exists in hairdressing services. In addition, among other services, the value of prostitution has been estimated.

3.21.1.2. Calculation method

The calculation method for industries other than business and employers' organisations is the same as that of education described above i.e. production accounts are calculated through output. 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

Market output of sewage and refuse disposal, sanitation and similar activities is calculated by using establishment data in the business register, data in structural business statistics and data in the financial statistics of municipalities and joint municipal authorities. Turnover in the industry is got from establishment data in the business register and is increased, based on structural business statistics data, as it was for health care services above. Also, market output of local authority utilities is added to market output turnover, on the basis of financial statistics of municipalities and joint municipal authorities. Waste water management is combined with water supply in the statistical classification of functions, so that waste water management which belongs to this industry is distinct from water management. The share is estimated on the basis of data from collection, purification and distribution of water industry, a distinction being made between local authority utilities and other waterworks utilities. When the market output of utilities for water management is deducted from that of utilities in the water management function in local authority financial statistics, the market output of utilities for waste water management is obtained. Computer software produced on own account is output for own final use.

Establishment data in the business register are used for recreational, cultural and sporting activities calculations. Lottery taxes paid by, and profits made on, VEIKKAUS (Finnish Lottery Company) and by RAY (Finland's Slot Machine Association) are deducted from turnover data in the business register because output is calculated at basic prices and lottery winnings are classed as taxable products. Winnings paid to participants are also deducted. The adjusted turnover thus obtained is increased on the basis of structural business statistics resulting in the market output. Further clarification, which will also take account of the recommendations of the Task Force, will be necessary in order to calculate the output of originals of literature, entertainment and art.

Market output of washing and dry-cleaning of textile and fur products and other personal service activities is calculated by means of the business register and structural business statistics data. Turnover, raised on the basis of structural business statistics data, is to be found in establishment statistics in the business register. The total of additions to inventory, production for own use and other return on business activities is calculated from structural business statistics. Sales profit is deducted from the last of these. From this is found the coefficient in relation to turnover in structural business statistics. It is used to raise turnover in the business register, resulting in market output. Output for own final use consists of own-account computer software produced.

Intermediate consumption

In calculating intermediate consumption for sewage and refuse disposal, sanitation and similar activities, the relation between it and output in structural

business statistics is utilised. Correspondingly, the same relation is utilised to find 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 and other variable and fixed expenses. The intermediate consumption thus calculated has added to it the intermediate consumption of local authority utilities, to be found in financial statistics as the total of services purchased, purchases during the financial period, additions to inventory, rents and other operating costs. In this industry, the drain maintenance share had to be separated from water management, as it was when calculating output above.

In the activities of business, employers and professional organisations, the share of intermediate consumption in relation to wages and salaries is presumed to remain stable.

In calculating intermediate consumption for recreational, cultural and sporting activities and other service activities, the relation between it and output in structural business statistics is utilised. Correspondingly, the same relation is utilised to find 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 and other variable and fixed expenses. The share of specially produced software in all industries is deducted from intermediate consumption, and to it is added the intermediate consumption of the production of writers in recreational, cultural and sporting activities.

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

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 over 90% of 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)

Household serving activities include home help and other paid labour for domestic tasks, e.g. cleaners. Household serving activities are output for own-account production in the household sector.

The source material for household serving activities is not reliable. Data on earnings are derived from data supplied by the Association of Accident Insurance Companies and from an unreliable Household Budget Survey conducted in 1994 – 96. Figures in the survey fluctuated from year to year and did not give good coverage in relation to data from the Association of Accident Insurance Companies. These data were also the basis for earnings of household serving activities.

Besides earnings, the industry also pays employers' social contributions.

No intermediate consumption of 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.

Industry 95 includes cooks, servants, nannies, nurses and helpers for disabled and old persons, private teachers, chauffeurs etc. 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 a new law 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, we have a lot of small companies or self-employed for this kind of household work (especially in cleaning) and they belong to the non-financial corporations or unincorporated enterprises in household sector. (If you use this kind of enterprise, you get a receipt to be

attached to your tax form, if you employ a private employee, you need to do much more paperwork.)

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.

There is a question about household services in the Household Budget Survey (HBS), the latest version being from 2001. There is an average amount of money households used for those services, and it is multiplied by the amount of households. According to HBS households used those services worth of 66 million EUR, which is about 1/3 of the figure we have estimated from the supply side (189 million EUR for 2001).

Table 34: Output of household services, 1995-2001, million

	1995	1996	1997	1998	1999	2000	2001
Output = Added value = Compensation of employees	81	90	104	122	137	143	151

3.23. *Treatment of extraterritorial 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 year-end accounts, 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 Navigation Administration (ML) for pilot services. The public sector has income deriving from payments for other non-market output (P139).

The accompanying table show examples of service charges collected by central and local government.

Table 35: Key central government separate income items in 2000, million

	P11	P139
Defence administration's construction utility	150	
Operation of universities	203	
Navigation Administration	87	
Railway Administration Centre	61	
Technical Research Centre of Finland	88	
Ministry of Defence forest income	5	
Key items total	594	
Aggregate level in 2000	1 323	75

Table 36: Key separate income items in local government sector, in 2000 million

Municipalities		SIC	P11	P139
Office space and rental services	Internal sales income	751	152	
Office space and rental services	Rent income	751	358	
Internal services	Internal sales income	751	378	
Children's day care	Payments	853		144
Institutional care of the elderly	Payments	853		121
Basic health care	Payments	851		142
TOTAL			888	407
Joint municipal authorities				
Specialist nursing care	Sales income from joint municipal authorities	851	178	
Specialist nursing care	Other sales income	851	105	
Specialist nursing care	Payments	851		191
TOTAL			283	191
Municipalities + Joint municipal authorities			1 171	598
Aggregate level, in 2000			2 749	1 488

Import duties include, besides ordinary import duties, duties on agricultural products for which data are available from the National Board of Customs and fees for sugar storage and production for which data are available from the Ministry of Agriculture and Forestry.

Import duty accounts have been rendered to the European Union since 1995. Import duties collected by the State in 1995-97 were mostly delayed payments. They mainly consist of entries in the bookkeeping account under 9013 "Taxes levied on imports". Returns to the bookkeeping account in question were allocated partly to other product taxes duties, e.g. motor taxes. Consequently, entries in this account are treated in the national accounts on a case by case basis.

Other taxes on imports excluding VAT and import duties consist of pharmacy fees, excise duties on manufactured tobaccos, duties on sugar confectionery, soft drinks, fuel, car tax, transfer of assets tax, lottery tax, oil waste tax, retained earnings from pools and lotteries and the Finnish Slot Machine Association, other revenue from taxes and tax refunds. Each of the above items is allocated a specific subitem in 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, sugar confectionery, alcoholic beverages, soft drinks, fuel, stamp taxes, taxes on the transfers of funds, and lottery taxes. 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 levies, lottery taxes).

Table 37: Revenue from various kinds of taxes on products, FIM mill.

ESA95 Questionnaire	Item	1996	1997	1998	1999*	
TRD211	Value-added tax/Turnover tax	110401	38 393	44 580	47 882	49 963
TRD214G	Insurance premium tax	110402	1 581	1 637	1 742	1 855
TRD214I	Pharmaceutical fees	110403	391	426	450	470
TRD214H	Tele tax	110404	0	0	0	0
TRD2121	Import duties	110601	67	4	0	0
TRD214A	Duties on manufact. tobaccos	110801	3 008	3 210	3 354	3 449
TRD214A	Duties on sugar confectionery	110802	155	165	180	170
TRD214A	Duties on alcoholic drink	110804	7 032	7 196	7 198	7 483
TRD214A	Duties on soft drinks	110805	168	176	179	196
TRD214A	Duties on fuel	110807	12 312	14 474	14 910	15 825
TRD214B	Stamp taxes	111001	2 089	751	150	-20
TRD214I	Duties on cars & motorcycles	111003	3 611	4 210	5 259	6 115
TRD214C	Transfer of assets taxes	111005	0	1 765	2 752	2 444

TRD214F	Lottery taxes (on profits)	111006	368	394	434	448
TRD214A	Oil pollution compensation pre.	111908	21	20	20	19
TRD215	Other tax revenues	111909	167	-1	-18	-26
TRD2121	Other tax revenues	111909	0	0	0	-26
TRD211	Recoverable VAT returns	122898	2 747	3 907	4 406	4 570
TRD214F	Retained earnings/Pools and lotteries	122991	1 725	1 920	2 070	2 173
TRD214F	Retained earnings/Finnish Slot Machine Association	123392	1 574	1 679	1 735	1 913
TRD214A	Sanctions for default on taxes (National Board of Customs)	123902	14	26	19	11
TRD214A	Tax returns (All)	289961	-14	-8	-4	-9
TRD2121	Tax returns (All)	289961				-34
TRD2121	Tax returns	288195	0	0	0	-8
	VAT account in balance sheet account		0	0	11	1
TRD211	VAT primary production timing adjustment		-91			
TRD211	Income recognition on VAT to Social Insurance Institution		2 400	2 400	2 400	2 400
	Extra-budgetary funds:					
TRD214G	Fire protection premium		37	37	37	35
TRD214A	National emergency supplies premium		239	287	295	293
TRD214A	Oil pollution compensation premium		29	33	33	35
	Extra-budgetary funds, total		305	357	365	363
	STATE, TOTAL		78 021	89 288	95 493	99 741
	LOCAL AUTHORITIES:					
TRD214F	Lottery tax (Åland)		5	6	6	7
	EU:		3 932	4 065	3 855	3 974
TRD211	EU payments based on VAT		2 948	3 085	2 945	3 128
TRD2121	Import duties for which account rendered to EU		984	980	910	846
	PRODUCT TAXES, TOTAL		81 958	93 359	99 354	103 722

3.25. Value-added tax

The value-added tax accruing is obtained by adding value-added tax from the Financial Statement and Report (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. 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 under "Finland's remittance payments 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 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 in Finland, they are treated in the national accounts as paid by the European Union and only subsidies financed by the State are recorded as paid by Finland. 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.

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 38: Subsidies paid separately on products, FIM mill.

Name	Item	1996	1997	1998	1999*
National subsidy for agriculture and horticulture	301241/303141	2 902	2 529	2 017	1 838
CAP Subsidies (excl. fields lying fallow)	301243/303143	0	1	0	0
Purchase and development of mass transit services	316061/315761	424	407	371	372
Items, total		3 325	2 936	2 388	2 210
Entry differences (cash, accrual principle):					
National subsidy for agriculture and horticulture (EU)	303141	0	0	-72	0
Other national subsidies (from various items)	Various items	-269	-56	0	0
Entry differences (cash, accrual principle)		-269	-56	-72	0
STATE: Subsidies on products, total		3 057	2 880	2 316	2 210
LOCAL AUTHORITIES: To cover deficits of mass transit companies		657	620	630	635
FOREIGN COUNTRIES:					
CAP Subsidies (excluding fields lying fallow)		1 449	1 424	1 430	1 447
Intervention Fund of Agriculture		657	767	730	695
FOREIGN COUNTRIES, TOTAL		2 106	2 191	2 160	2 142
SUBSIDIES ON PRODUCTS, TOTAL		5 820	5 691	5 106	4 987

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 39: GDP by income revenues in 1998.

GDP by income revenues in 1998

	FIM mill.	%
1 Wages and salaries	260 219	37.7
2 Employers' social contributions	70 765	10.3
3 Operating surplus / Mixed income	161 991	23.5
4 Taxes on production and imports	100 838	14.6
5 Subsidies	15 946	2.3
6 Consumption of fixed capital	111 656	16.2
7 Statistical discrepancy	0	0.0
9 GDP at market prices 1+2+3+4+5+6+7)	689 523	100.0

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.

A trial calculation of GDP by the income approach was undertaken in the years 1995-1997. It is described in Section 4.10.

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, 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 wage 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 40: Wage and salary main data source or calculation method for industries.

Industries:	Wage and salary data source or calculation method:
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, final central government accounts, 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 business
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
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 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.

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 force expenses in the private sector produced by Statistics Finland in 1996 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 1996.

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 sources 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 1998):

- 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 KELA), allowing them to qualify as wages and salaries would distort the operating surpluses of corporations and the national economy.

A share equal to 0.4% 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 1996, it is estimated that this share equals 0.4 % 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 are 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 general government 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 41: Wages + salaries in the national accounts 1995-01*, million

Wages and salaries in the national accounts € million	1995	1996	1997	1998	1999	2000	2001*
Wages and salaries from a main occupation	35 329	37 142	38 924	41 678	43 727	46 753	49 843
Benefits in kind (taxable, incl. employee stock options until '99)	445	475	547	712	1 499	669	736
Other benefits in kind (0.4 % of wages and salaries from a main occupation)	141	149	156	167	175	281	299
Benefits in kind for conscripts & conscientious objectors doing alternative service	93	86	81	71	76	82	91
Remuneration of costs comparable to wages and salaries	52	53	74	63	61	59	55
Seafarers' income	238	254	259	275	280	277	279
Wages and salaries from a subsidiary occupation	620	634	799	807	862	914	951
Construction sector holiday wages and salaries	28	28					
Remuneration for work	163	214	175	182	201		
Gratuities / Other earnings	121	110	117	115	103	100	81
Employers' sickness insurance compensation	-251	-254	-257	-265	-282	-300	-314
President's salary	0	0	0	0	0	0	0
Premiums obtained by staff funds	40	26					
Tips and service gratuities	4	4	4	4	4	4	5
Informal pay allowance paid for the care of an ill person at home	-58	-58	-58	-58	-61	-64	-73

(deducted from remun. for work)							
Hidden economy	235	254	296	422	427	465	480
Employee stock options				-168	-875		
Total national wages and salaries	37 037	38 903	41 105	44 037	46 172	49 423	52 634

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 **sylviculture** 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.

Employers' social contributions are obtained using the Central Pension Security Institute's (ETK) retirement pension payment percentages for enterprises, the payment statistics 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 **logging**. 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 (Pekka Rytönen Oy, Consultants). Employer social contributions are calculated on the same principle as in the sylviculture 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 sylviculture 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 silviculture 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 (Pekka Rytönen Oy, Consultants).

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 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 1996. 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 1996". 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 bookkeeping 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.

Local government wages and salaries are derived from staff costs according to the table of investment expenses in the local government financial statistics by deducting the included employers' social contributions. The latter are defined by means of percentages paid by the employer.

Central government wages and salaries are derived, the defence forces excepted, from the compensation of employees for State investments in the construction of buildings and the compensation of employees for estimated yearly repair work by deducting the included employers' social contributions. The latter are determined by means of the percentages paid by the employer. Compensation of defence forces employees is determined from output using the ratio between the output and the compensation of employees of local and central government.

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 whom 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, data about central government on-budget accounting are obtained from compensation of employees paid by the Roads Section. The amounts paid are separated into wages and salaries and social contributions. The former are then divided into production and administration in accordance with the budget allocation scheme. Civil engineering work is counted as production wages and salaries.

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. 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 the those 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 1996, it will be published every four years), "Private sector monthly salaries", "From wages and salaries to annual earnings, the wage and salary structure" (most recently from 1995, it will be published every four years). Also, for hotel and restaurant activities, "Hotel and restaurant sector pocket statistics", compiled by the Finnish Hotel and Restaurant Association, gives information about wage costs. The drawback to it is that pocket statistics data are based largely on Statistics Finland sources.

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 1996 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 and establishment 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. Local government transit companies, harbours and national emergency supply storage belong to public market output.

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 (VKL).

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 (SIC 70) using the publication "Labour Costs in the Private Sector 1996". 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.

Wages and salaries are obtained directly from the business register. Where local authority mass transit is 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

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. 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 reservists are counted as wages and salaries in the defence sector: meals, travel and uniforms.

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 Office of the Insurance Authority (VTV). Wages and salaries of the local authority pension insurance institution (KVTEL) 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.

Non-profit institutions

Wages and salaries of non-profit activities serving households are based on establishment data in the business register. Other data sources have been used for the following industries:

Wages and salaries of religious organisations (9131) is obtained from several sources: KELA, the business register, and Evangelical Lutheran Church parish financial statistics. The latter is maintained by the Evangelical Lutheran Church and it covers in an exhaustive way most financial statement data. The material is register based. It includes neither the Orthodox Church nor other religious organisations, as might be expected. Data on wages and salaries paid by Evangelical Lutheran and Orthodox parishes is obtained from KELA, which is considered to be a reliable source. This wage and salary total is raised to the level of all religious organisations based on business register wage and salary data.

The starting points for household service activities (95) are somewhat unreliable. Data on earnings are derived from data supplied by the Association of Accident Insurance Companies and from the Household Budget Survey. The figures in the survey fluctuate from year to year and are somewhat unreliable in relation to data from the Association of Accident Insurance Companies. Earnings from household service activities are based on these data.

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. Therefore, adjusting items are needed. They resolve the discrepancy and are added to (or deducted from) the wage and salary total by industry so that the total equals the sum calculated for the overall economy.

Table 42: Wages and salaries by main branch of activity incl. adjusting items, 1995 – 2001, mill.

	1995	1996	1997	1998	1999	2000	2001
O Industries, total	37 037	38 903	41 105	44 037	46 172	49 423	52 634
A Agriculture, hunting and forestry	526	513	513	531	579	596	613
B Fishing	11	10	10	10	9	9	9
C Mining and quarrying	97	95	105	107	113	121	129
D Manufacturing	9 092	9 529	10 048	10 909	11 307	12 134	12 908
E Electricity, gas and water supply	486	516	520	536	535	521	536
F Construction	2 144	2 355	2 689	2 980	3 192	3 453	3 576
G Wholesale and retail trade	4 138	4 348	4 578	4 922	5 197	5 509	5 791
H Hotels and restaurants	806	846	880	944	1 002	1 063	1 134
I Transport, storage and communication	2 836	2 996	3 176	3 420	3 530	3 678	3 753
J Financial intermediation and insurance	1 344	1 300	1 273	1 260	1 299	1 400	1 451
K Real estate, renting and bus. activities	2 786	3 035	3 375	3 848	4 328	4 939	5 550
L Administration; compuls. social security	3 046	3 213	3 398	3 483	3 600	3 752	3 972
M Education	3 053	3 210	3 330	3 521	3 669	3 820	3 994
N Health and social work	4 818	5 182	5 369	5 587	5 755	6 068	6 461
O Other community, social & personal service activities.	1 613	1 711	1 800	1 894	1 992	2 102	2 220
P Household service activities	66	74	86	97	109	123	131
X Industry unspecified (Adjusting item)	175	-30	-45	-12	-44	135	406

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.

Table 43. Comparison of varieties of payment sums calculated by actual accrual and by industry.

FIM, mill.	1 995	1 996	1 997	1 998	1999*
Employers' social contributions, total					
- accrual method	62 111	63 016	65 412	70 765	73 840
- total by industry	63 596	63 831	65 390	70 066	72 374
- difference	-1 485	-815	22	699	1 466
National pension & sickness insurance contribs.					
- accrual method	11 630	12 395	11 887	12 749	13 236
- total by industry	11 738	12 697	12 266	13 097	13 705
- difference	-108	-302	-379	-348	-469
Employee pension contributions					
- accrual method	35 360	37 541	39 593	43 465	46 248
- total by industry	35 667	37 662	39 626	43 437	45 274
- difference	-307	-121	-33	28	974
Statutory accident insurance premiums					
- accrual method	2 071	2 190	2 479	3 260	2 741
- total by industry	2 194	2 257	2 602	3 038	3 160
- difference	-123	-67	-123	222	-419
Unemployment insurance contributions					
- accrual method	9 149	6 682	6 775	6 965	7 216
- total by industry	9 474	6 338	6 746	7 001	7 162
- difference	-325	344	29	-36	54
Group life insurance premiums					
- accrual method	371	316	301	192	225
- total by industry	232	217	219	209	223
- difference	139	99	82	-17	2
Voluntary social contributions					
- accrual method	2 151	2 530	3 007	3 381	3 673

- total by industry	2 912	3 298	2 561	2 531	2 347
- difference	-761	-768	446	850	1 326
Imputed social contributions					
- accrual method	1 379	1 362	1 370	753	501
- total by industry	1 379	1 362	1 370	753	503
- difference	0	0	0	0	-2

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 accrued 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 account 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 Pension Fund), LEL (Short-term Employees Pension Fund), TaEL (Artists and Workers in Other Particular Groups Pension Fund), YEL (Entrepreneurs Pension Fund), MYEL (Agricultural Entrepreneurs Pension Fund) 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 Pension Fund (independent of the budget) from which data about them is 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 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, separation, 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 44. Employers' social contributions 1995-1999 by type of insurance.

Employers' social contributions as a percentage of wages and salaries

Payment type	1995	1996	1997	1998	1999
National pension and sickness insurance					
- Private I	4.00	4.00	4.00	4.00	4.00
- Private II	5.60	5.60	5.60	5.60	5.60
- Private III	6.50	6.50	6.50	6.50	6.50
- Unincorporated state enterprises	4.00	4.00	6.80	6.80	6.80
- Central government	6.80	6.80	6.80	6.80	6.80
- Local government	6.80	6.80	4.75	4.75	4.75
- Parishes	11.80	11.80	10.80	10.80	10.80
TEL (Employees Pension Fund) on average	16.60	16.80	16.70	16.80	16.80
LEL (Short-term Employees Pension Fund), on average	17.80	17.90	17.70	17.50	17.50
TaEL (Artists and Workers in Other Particular Groups Pension Fund)	11.00	10.70	10.50	11.30	11.30
MEL (Seamen's Pension Fund)	9.00	9.00	9.50	9.50	10.00
KvTEL (Local Authority Employee Pension Fund)	20.30	21.00	20.80	21.20	21.40
VEL, (State Employee Pension Fund), most common	19.50	19.20	19.00	18.80	18.80
KiEL (Evangelical Lutheran Church Pension Fund)	27.00	27.00	27.00	27.00	27.00
Unemployment insurance contributions					
- On wages and salaries up to FIM 5 million	2.00	1.00	1.00	0.90	0.90
- On wages and salaries exceeding FIM 5 million	6.10	4.00	4.00	3.90	3.85
Group life insurance contributions					
- Private	0.12	0.10	0.09	0.08	0.08
- Local authority	0.10	0.10	0.10	0.10	0.10
- Central government	0.14	0.11	0.09	0.06	0.09
Accident insurance contributions					
- on average	1.20	1.20	1.40	1.40	1.30

Employers' national pension and sickness contributions

The percentages for employers' national pension and sickness contributions (KELA payments) vary according to the employer. General government employers have different percentages. Contributions for private enterprises are traditionally divided into three categories. The size of each depends on the amount of depreciation in the profit and loss account and their proportion to total wages and salaries.

For most market production industries the lowest, or first payment category is used. In manufacturing and many other industries, the average contribution percentages of enterprises by industry are calculated by utilising the depreciation and total wages and salaries from structural business statistics. For

local authority enterprises, a percentage is applied to local authorities and local government regional authorities. Different percentages are applied to employers (enterprise, general government) in construction and transport.

Employee stock options are not part of wages and salaries, but the employers' national pension and sickness insurance contributions are paid based on them, the only insurance contribution employers must pay in that respect. When an employer's national pension and sickness contributions are evaluated in the profit and loss statement by the percentage payments method, the income on employee stock options accruing in the industry in question must be added to wages and salaries in the industry.

All employers' social contributions determined by wages and salaries subject to tax withholding and tax at source, are to be found in payment control data by enterprise and industry. These data will be used to calculate KELA payments made to manufacturing and other industries. Benchmark calculations show that both methods yield much the same result at the overall manufacturing level with some differences depending on the industry.

Employment insurance contributions

Employment insurance contributions also vary according to employer and enterprise.

Data about the employment insurance contribution percentages implemented by enterprises according to industry are obtained annually from KELA at the standard industry classification's two-digit level. The percentage share, from which the employee's contribution is deducted, is used to calculate employment insurance contributions in market production.

For municipal utilities, a percentage of employment insurance contributions is applied to municipalities and joint municipal authorities.

For non-profit activities serving households an average employee pension percentage (TEL) is applied. Religious organisations are the only exception and for them the average Church employment insurance percentage is applied.

Unemployment insurance contributions

Unemployment insurance contribution percentages are determined according to the total wages and salaries of an enterprise. Starting in 1995, there was a FIM 5 million limit. A lower percentage is applied to the first FIM 5 million. Using structural business statistics data, unemployment insurance contributions are calculated by establishment/enterprise separately for single establishment and multiple establishment enterprises. Using this separation method ensures that the FIM 5 million limit will be applied only once.

Accident insurance contributions are calculated as percentages of total wages and salaries by industry. The share is obtained annually from statistical data collected by the Association of Accident Insurance Companies at the five-digit level of standard industrial classification. The statistics are based on the enterprise rather than the establishment. Each enterprise is classified by its main industry. Average accident insurance contribution percentages for local government are applied to unincorporated municipal enterprises.

Group life insurance contributions

Group life insurance contributions are calculated by industry using average percentage shares of total wages and salaries.

Employers' voluntary social contributions

There are no independent data available by industry about employers' voluntary social contributions.

The structural business statistics form contains questions about total statutory and voluntary contributions. These data are used in calculations for manufacturing and several other industries. The statutory contributions produced by the methods described above are added together and deducted from structural business statistics data and the remainder is regarded as the amount of voluntary contributions.

Employers' voluntary social contributions in the enterprise sector for construction of buildings is 0.5 %.

The voluntary social contributions of local government are obtained by deducting compulsory contributions from the total of such contributions paid as reported by local government.

Employers' imputed social contributions

Employers' imputed social contributions are recorded in instances where, instead of funding employee pension insurance contributions, employers pay pensions directly to former employees. The pensions are not recorded as employers' social contributions but as imputed contributions. This is in order that labour costs will be comparable across different industries, irrespective of the employee pension system used. Funding employee pensions has continued to increase in recent years so that imputed employee pensions have declined.

Starting in 1988, local government changed over to a funded pension insurance system. Central government has continued to pay comprehensive and upper secondary school teachers' pensions directly to local government. In local government accounts, the imputed pension appropriations of such teachers have been recorded as employers' imputed social contributions. Until 1997, all pension appropriations of comprehensive and upper secondary school teachers were imputed. Starting in 1998, the future pensions of such teachers have been progressively funded. The share paid by local government is being raised each year. Consequently, imputed social contributions have gradually declined since 1998 and their funded portions transferred to employee pension contributions. Imputed social contributions are obtained by multiplying the total wages and salaries of comprehensive and upper secondary school teachers by the imputed employee pension insurance percentage.

Since 1994, employers' imputed social contributions have emerged to some extent in unincorporated state enterprises in addition to local government and in some financial institutions and activities serving the agricultural sector.

Collectively negotiated, so-called development funds have also been recorded in social contributions in conjunction with employees retiring voluntarily.

4.7.2.3. *Adjusting item for employers' social contributions*

Because the total of employers' social contributions calculated by industry does not tally with the contributions for the whole economy, an adjusting item becomes necessary to resolve the discrepancy. This is added to (or deducted from) the total of employers' social contributions by industry so that it tallies with the employers' social contributions for the whole economy.

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. 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 FIM 10 million annually.

Motor vehicle tax is payable on diesel powered vehicles annually. The tax depends on vehicle weight. The share paid by households is first deducted from tax revenues as it is classed under other indirect taxes. The grounds for this are long established. Of the actual share classed as taxes on production, a share is first designated to the transport industry, which share is payable by anyone professionally employed in the transport sector, based on data from the Vehicle Administration Centre. The taxes remaining are broken down among other industries based on data from the Vehicle Administration Centre about the number of diesel powered vehicles.

The annual motor vehicle tax is currently FIM 500 for vehicles first registered not later than 1993 and FIM 700 for vehicles first registered in 1994. 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 Vehicle Administration Centre are used in the distribution. The share of taxes from the transport industry is first calculated, using data on motor vehicle tax from the Vehicle Administration Centre. 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. 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 must still be deducted any mixed income earned by households (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 self-built 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 traditional 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.

Table 45 Gross domestic product from the income approach in 1997.

Gross domestic product from the income approach, 1997	Gross operating surplus	Compensation of employees	Other taxes on production less subsidies	Gross value added
1 National accounts (at basic prices) among which	248 279	308 407	-8 822	547 864
2 Forestry	11 789			
3 Financial intermediation and insurance	10 556			
4 Letting and operation of dwellings	51 935			
5 Business and employers' organisations	161			
6 Self-built construction	2 448			
7 General government	14 617			
8 Non-profit institutions serving households	1 064			
9 FISIM	-14 858			
10 Gross operating surplus according to structural	128 817			

business statistics				
11 Agriculture according to agricultural enterprise and income statistics	9 166			
12 Local government utilities according to local government financial statistics	4 108			
13 Other items according to the national accounts (2+3+4+5+6+7+8+9)	77 712			
14 Total (10+11+12+13)	219 803	308 407	-8 822	519 388
15 Total, as a percentage of GDP (1)	88.5			94.8
16 Absolute difference (14 minus 1)	-28 476			-28 476

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.

The mixed income households obtain is calculated as an independent section of the compilation of household sector accounts. Mixed income is calculated as the sum of several accounting entities. These accounting entities are:

- Agriculture (Industry 01)
- Forestry (02)
- Fishing (B)
- Other industries (C – O)
- Self-built 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.

The central government's share of the agriculture industry remains small. Consolidated accounting data and the Financial Statement and Report were used as sources.

Forestry (02)

The mixed income earned in the forestry industry is calculated in the same way as for agriculture mixed income. 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. Household sector includes all self-employed persons who employ less than two working years. Self-built 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.

Self-built construction

The output of self-built 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 self-built construction for hours worked is the average hourly rate for employees engaged in the construction of buildings, excluding employer 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 data base. 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 Kopiosto, 90 % of writing income is subject to personal income tax while 10 % is subject to business income tax. Thus 90 % of fees counts 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 46. Household mixed income, 1995– 1999.

FIM million	1995	1996	1997	1998	1999*
A 01 Agriculture	10 991	8 510	8 585	6 967	7 178
A 02 Forestry	7 340	6 366	9 025	10 048	9 847
B Fishing	389	360	313	320	301

C - O Other industries	5 290	5 903	6 805	6 815	7 376
Self-built construction	1 942	2 067	2 448	2 815	3 209
Renting of dwellings	3 215	3 715	4 065	4 492	4 733
Artists' royalties	135	148	155	163	163
Hidden economy	1 257	1 364	1 538	1 696	1 500
Mixed income, total	30 559	28 431	32 933	33 316	34 307

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. It is presumed that consumption of fixed capital is linear, i.e. a constant share of the original value of capital goods depreciates over the entire service life of the goods.

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: gross capital stock and net capital stock. The table shows the classification of fixed assets.

Table 47: Classification of fixed assets.

AN11	Fixed assets
AN111	Tangible fixed assets
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
AN112	Intangible fixed assets
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.

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:

$$w_{t-T} = \exp \left\{ - \left[\frac{\Gamma(1 + (1/\alpha))}{E} \tau \right]^\alpha \right\}, \quad (2)$$

where $\tau = t - T + 0.5$, E is the average service life and α is the shape parameter.

The gross stock at the end of year t is:

$$BKA_t = \sum_{T \geq t - J_t + 1} w_{t-T} I_T, \quad (3)$$

where $T \geq t - J_t + 1$ and I_T is the gross fixed capital formation in year T. $J_t = \max(1.5\alpha, 100)$. 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 e.g. used in productivity calculations.

Net capital stock

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 and in input-output tables. Net capital stock is calculated using straight-line depreciation:

$$NKA_t = \sum_{T \geq t-J_t+1} w_{t-T} I_T d_{t-T}, \quad (4)$$

where $d_{t-T} = 0$, when $T \leq t-E+0.5$,

and $d_{t-T} = 1-(1/E)(t-T+0.5)$ otherwise.

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 enquiries, 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 Railway Administration Centre, Road Administration and Navigation Administration. The length of the service life of manufacturing capital goods are based *inter alia* on Statistics Finland's enquiries concerning fixed asset replacement provisions in industries C,D,E and the length of average and expected service life estimates dating from 1990. The enquiry regarding manufacturing capital stock will apply to 2002, and from 2005 onwards, such enquiries 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 table shows the average service life of other capital goods.

Table 48: Average service life of capital goods

Industry	Other construction of buildings	Civil engineering, etc.	Transport equipment	Other machines and equipment*
A	35-40	30-50	9	5-12
B			10	15
C	30	25	(7) 1)	18
DA	40	25	(7)	17-19
DB	35	40	(7)	14
DC	35	40	(7)	14
DD	35	25	(10)	16
DE	40	35	(6-10)	15-18
DF	35	40	(10)	23
DG	40	35	(10)	18
DH	45	40	(7)	18
DI	40	40	(10)	19
DJ	40	30-40	(8-12)	16-23
DK	40	30	(8)	13
DL	40	30	(7)	11
DM	45	40	(9)	15
DN	35	35	(8)	14
E	45-50	35-40	8-10	24-27
F	40	30	10	10
G	40	30	10	15
H	40		10	15
I	20-50	20-70	7-25	5-25
IA	20-50	40-70	8-25	5-25
601	50	70	20	25
602	40	40	8-10	5-10
603		40		
61	50	40	25	15
62	20	40	15	15
63	40-50	40-70	10	15
6302	50	52	10	15
IB	40	20	10	15
J	40			10
K	40-50	40-70	8-10	10-15
L	50	70	10	15
M	50	70	10	10-15
N	40-50	70	8-10	10-15
O	50	40-70	8-10	10-15

1) In industries C - DN, data on transport equipment are not separated in the population but are included proportionately in the 'Machines and equipment' column data.

* In industries C, D and E after 1990, annual reduction in service life is 0.4-0.5 %. (before 1990 the annual reduction in service life was 0.5 – 1 %).

Sector transfers

The execution of the Finnish NA capital stock calculations is two-staged. In the first stage the PIM 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 privatizations (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 (S111S14N) as shown in Table 1. 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 1. Industry 6303 Supporting air transport activities gfcf and stocks

Industry 6303, total gfcf in current prices, MIO Euro	1987	1988	1989	1990
S111S14N	0	0	28	43
S1311	19	24	0	0
Industry 6303, total gcs in current prices, MIO Euro	1987	1988	1989	1990
S111S14N	0	0	797	883
S1311	559	619	0	0
Industry 6303, total ncs in current prices, MIO Euro	1987	1988	1989	1990
S111S14N	0	0	547	603
S1311	390	427	0	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 are 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 120 MIO euro in non-residential buildings, 428 MIO euro in civil engineering and other structures, 33 MIO euro in other machinery and equipment and 12 MIO euro 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/household sector (S111S14N) which is their new owner. Thus in year 1989 the ncs in industry 6303 in the non-financial/household sector (S111S14N) is $120+428+33+12=593$ MIO euro in year 2000 prices plus the gfcf of 35 MIO euro in 2000p (less 1 MIO euro that already goes to cfc) i.e. 627 MIO euro in 2000p. This amount when inflated back to current prices becomes 547 MIO euro.

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 e.g. privatizations the sector that owns the fixed asset changes the correction matrixes ensure that the procedure is correct.

Table 2. Part of the correction matrix for ncs, MIO euro in year 2000 prices.

	0	0	0	1989	1990
S111S14N	6303	P51121S		120	117
S111S14N	6303	P51122S		428	419
S111S14N	6303	P51132S		33	30
S111S14N	6303	P5122S		12	7
S1311	6303	P51121S		-120	-117
S1311	6303	P51122S		-428	-419
S1311	6303	P51132S		-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 almost 40% of GDP, foreign trade is a key component of Finland's economy.

Table 50: Gross domestic product by the expenditure approach, 1998.

Gross domestic product by the expenditure approach, 1998	FIM mill.	%
1 Final consumption expenditure	495 449	71.9
Private final consumption expenditure	346 021	50.2
Government final consumption expenditure	149 428	21.7
- Individual final consumption expenditure	93 577	13.6
- Collective final consumption expenditure	55 851	8.1
2 Gross fixed capital formation	128 913	18.7
Private gross fixed capital formation	108 954	15.8
Government gross fixed capital formation	19 959	2.9
3 Changes in inventories	6 816	1.0
4 Exports of goods and services	267 467	38.8
5 Imports of goods and services	206 650	30.0
6 Statistical discrepancy	-2 472	-0.4
7 GDP at market prices (1+2+3+4-5+6)	689 523	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 taken into account also 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 are 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 local authorities and associations of local authorities, consolidated accounting data and the Financial Statement and Report 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 financial statistics of local authorities and associations of local authorities, consolidated accounting data and the Financial Statement and Report and the profit and loss statements of various corporations. 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 50: 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 in 1990-1996. The level of investments in renovation was defined on the basis of a special report produced in 1990. This level was brought forward during 1991-1996 using indicators. 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 most problematic expenditure component at present from the standpoint of exhaustiveness in national accounts is foreign trade in services, as data on payments from abroad collected earlier by the Bank of Finland were discontinued after 1998. The way that statistics on exports and imports of services are compiled is now being revised at Statistics Finland and the quality of statistics should be satisfactory in coming years (cf. Section 5.16).

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.

Co-ordination and balancing of the production and expenditure approaches by supply and use tables does not yet provide a basis for compiling the annual national accounts in Finland. Such will soon be the case, however. When implemented, it will ensure a more systematically exhaustive approach, also with respect to the estimation of GDP expenditure components, than at present.

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.

<i>CODE</i>	<i>NAME OF SOURCE</i>	<i>NAME OF COMPILER/PUBLISHER</i>
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	The Ministry of Agriculture and Forestry's Information Service (TIKE)
5	Production statistics	Statistics Finland
6	Foreign trade statistics	The National Board of Customs
7	Intoxicant statistics yearbook	The National Research & Development Centre for Welfare and Health (STAKES)
8	Tobacco statistics	STAKES & Statistics Finland
9	Home appliance statistics	The Association of Home Appliance Dealers
10	Finnish medical statistics	The National Agency for Medicines & the Social Insurance Institution (KELA)
11	Expenditure on Social Affairs and Health	The National Research & Development Centre for Welfare and Health

12	Vehicle register	The Vehicle Administration Centre
13	Mass-media statistics	Statistics Finland
14	Hotel and restaurant industry statistics	The 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, was last conducted only in 1998 and 2001. It was conducted annually from 1994-1996 using a small sample of 2000-3000 households. The yearly Household Budget Survey was discontinued because the results proved unreliable.

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 line 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 (marks/year/household, in 2001: cent/year/household). The most recent calculations rely on surveys in 1998 and 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 is 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 A. Preliminary revision of data. Example.								
FNA Consumption item heading	Weight	FNA Consumption item heading	Weight	Heading code	Heading	Year 1998		
						1	2	3
						Final consumpt. expendit. per house-hold	Coefficient: Households in Finland	Household final consumpt. expendit. total (un-adjusted)
						FIM	Units, mill.	FIM mill.
C03121SD Outdoor clothing	1.00			03121	Men's clothing	1 448	2 355	3 410
C03121SD Outdoor clothing	1.00			0312101	Winter overcoats, Ulster style overcoats and other overcoats	106	2 355	250
C03121SD Outdoor clothing	1.00			0312102	Outdoor leisure wear, rainwear	268	2 355	631
C03121SD Outdoor clothing	1.00			0312103	Blazers, suits, jackets, trousers	377	2 355	888
C03121SD Outdoor clothing	1.00			0312105	Knitted pullovers, short coats and waistcoats	57	2 355	134
C03121SD Outdoor clothing	1.00			0312106	Shirts, blouses, tops and vests	163	2 355	384
C03121SD Outdoor clothing	1.00			0312107	T-shirts	36	2 355	85
C03121SD Outdoor clothing	1.00			0312108	Jeans and overalls	90	2 355	212
C03121SD Outdoor clothing	1.00			0312109	Shorts and short overalls	20	2 355	47
C03121SD Outdoor clothing	1.00			0312110	College wear and warm-up suits	76	2 355	179
C03121SD Outdoor clothing	1.00			0312111	Gymwear, swimwear and sports wear	31	2 355	73
C03121SD Outdoor clothing	1.00			0312112	Dressing gowns, bathrobes, aprons, etc.	13	2 355	31
C03122SD Underwear	1.00			0312113	Underwear	74	2 355	174
C03122SD Underwear	1.00			0312114	Nightwear, pyjamas	12	2 355	28
C03122SD Underwear	1.00			0312115	Socks and tights	66	2 355	155
C03121SD Outdoor clothing	0.5	C03122SD Underwear		0312120	Clothing n.e.c.	58	2 355	137

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 B. Household Budget Survey data linked to national accounts nomenclature. Example.			
	Year 1998		
	1	2	3
	Final consumption expenditure per household	Coefficient; households in Finland	Households' final consumption expenditure, total (unadjusted)
	FIM	Units, millions	FIM mill.
Heading in words			
C03 CLOTHING AND FOOTWEAR	5 834		13 738
C031 Clothing	4 858		11 440
C0311 Fabrics	78		184
C03110SD Fabrics	78	2 355	184
C0312 Garments	4 392		10 343
C03121SD Outdoor clothing	3 643	2 355	8 579
C03122SD Underwear	749	2 355	1 765
C0313 Accessories and articles of clothing	314		739
C03131SD Yarn, etc.	73	2 355	172
C03132SD Hats, ties, scarves, gloves, etc.	241	2 355	567
C0314 Garment repair and hire	74		174
C03140S Garment repair and hire	74	2 355	174
C032 Footwear	976		2 298
C0321 Footwear and footwear supplies	959		2 258
C03210SD Footwear and footwear supplies	959	2 355	2 258
C0322 Footwear repair and hire	17		40
C03220S Footwear repair and hire	17	2 355	40

Adjustment: Basic population not covered by 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.

Figure C. Adjustment: Population not included in Household Budget Survey. Example.

Heading in words	Year 1998		
	3	4	5
	Households' final consumption expenditure, total (unadjusted)	Final consumption expenditure of persons not included in Household Budget Survey (Persons living in institutions)	Final consumption expenditure adjusted for population
	FIM mill.	FIM mill.	FIM mill.
C03 CLOTHING AND FOOTWEAR	13738	63	13801
C031 Clothing	11440	42	11482
C0311 Fabrics	184	0	184
C03110SD Fabrics	184	0	184
C0312 Garments	10343	29	10372
C03121SD Outdoor clothing	8579	21	8600
C03122SD Underwear	1765	8	1772
C0313 Accessories and articles of clothing	739	6	746
C03131SD Yarn, etc.	172	0	172
C03132SD Hats, ties, scarves, gloves, etc.	567	6	574
C0314 Garment repair and hire	174	7	181
C03140S Garment repair and hire	174	7	181
C032 Footwear	2298	21	2319
C0321 Footwear and footwear supplies	2258	14	2272
C03210SD Footwear and footwear supplies	2258	14	2272
C0322 Footwear repair and hire	40	7	47
C03220S Footwear repair and hire	40	7	47

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.

Figure D. Adjustment: Bias, random variation, possible differences in concepts and definitions. Example.					
	Year 1998				
	3	4	5	6	
	Household final consumption expenditure, total (unadjusted)	Final consumption expenditure of persons not included in Household Budget Survey (Persons in institutions)	Final consumption expenditure adjusted for population	Adjustment: concepts, definitions, bias, etc.	
FIM mill.	FIM mill.	FIM mill.	FIM mill.		
Heading in words					
C03 CLOTHING AND FOOTWEAR	13 738	63	13 801	972	
C031 Clothing	11 440	42	11 482	763	
C0311 Fabrics	184	0	184	274	
C03110SD Fabrics	184	0	184	274	*) Adjusted for effect of estimated bias & random variation
C0312 Garments	10 343	29	10 372	302	
C03121SD Outdoor clothing	8 579	21	8 600	21	*)
C03122SD Underwear	1 765	8	1 772	282	*)
C0313 Accessories and articles of clothing	739	6	746	142	
C03131SD Yarn, etc.	172	0	172	113	*)
C03132SD Hats, ties, scarves, gloves, etc.	567	6	574	28	*)
C0314 Garment repair and hire	174	7	181	45	
C03140S Garment repair and hire	174	7	181	45	*)
C032 Footwear	2 298	21	2 319	209	
C0321 Footwear and footwear supplies	2 258	14	2 272	155	
C03210SD Footwear and footwear supplies	2 258	14	2 272	155	*)
C0322 Footwear repair and hire	40	7	47	54	
C03220S Footwear repair and hire	40	7	47	54	*)

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 travel 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 E. Adjustment: Household final consumption expenditure by non-residents in Finland.						
Heading	Year 1998					
	3	4	5	6	7	8
	Household final consumption expenditure, total (unadjusted)	Final consumption expenditure of persons not included in Household Budget Survey (Persons in institutions)	Final consumption expenditure adjusted for population	Adjustment: concepts, definitions, bias, etc.	Adjustment: Household final consumption expenditure of non-residents in Finland	Final consumption expenditure adjusted to SKT95 levels
	FIM mill.	FIM mill.	FIM mill.	FIM mill.	FIM mill.	FIM mill.
C03 CLOTHING AND FOOTWEAR	13 738	63	13 801	972	1 470	16 244
C031 Clothing	11 440	42	11 482	763	1 411	13 657
C0311 Fabrics	184	0	184	274	0	458
C03110SD Fabrics	184	0	184	274		458
C0312 Garments	10 343	29	10 372	302	1 342	12 016
C03121SD Outdoor clothing	8 579	21	8 600	21	1 072	9 692
C03122SD Underwear	1 765	8	1 772	282	270	2 324
C0313 Accessories and articles of clothing	739	6	746	142	70	957
C03131SD Yarn, etc.	172	0	172	113		285
C03132SD Hats, ties, scarves, gloves, etc.	567	6	574	28	70	672
C0314 Garment repair and hire	174	7	181	45	0	226
C03140S Garment repair and hire	174	7	181	45		226
C032 Footwear	2 298	21	2 319	209	59	2 587
C0321 Footwear and footwear supplies	2 258	14	2 272	155	59	2 486
C03210SD Footwear and footwear supplies	2 258	14	2 272	155	59	2 486
C0322 Footwear repair and hire	40	7	47	54	0	101
C03220S Footwear repair and hire	40	7	47	54		101

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 1996, 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.

The systematic use of data in the Business Register is shown as applying to 2000.

Figure F. Comparison: Final consumption expenditure estimates derived from Household Budget Surveys and other sources. Example.				
Heading	Year 1998			
	8	8a	9	
	Final consumption expenditure calculated from Household Budget Survey and adjusted to FNA2000 levels	Final consumption expenditure calculated from Household Budget Survey and adjusted to FNA95 levels	Comparison with FNA95 household final consumption expenditure	
FIM mill.	mill. €	mill. €		
C03 CLOTHING AND FOOTWEAR	16244	2732	2732	Because what is involved concerns a final estimate for 1998 derived from the parallel control of materials, the column figures (except for rounding off differences) are identical.
C031 Clothing	13 657	2 297	2 297	
C0311 Fabrics	458	77	77	
C03110SD Fabrics	458	77	77	
C0312 Garments	12 016	2 021	2 021	
C03121SD Outdoor clothing	9 692	1 630	1 630	
C03122SD Underwear	2 324	391	391	
C0313 Accessories and articles of clothing	957	161	161	
C03131SD Yarn, etc.	285	48	48	
C03132SD Hats, ties, scarves, gloves, etc.	672	113	113	
C0314 Garment repair and hire	226	38	38	
C03140S Garment repair and hire	226	38	38	
C032 Footwear	2 587	435	435	
C0321 Footwear and footwear supplies	2 486	418	418	
C03210SD Footwear and footwear supplies	2 486	418	418	
C0322 Footwear repair and hire	101	17	17	
C03220S Footwear repair and hire	101	17	17	

Statistical data from Business Register as source

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.

Against that, sales data by product are not available in the establishment register nor have short-term statistics for trade been produced to date. Product data for trade structural business statistics will appear every five years starting in 2002. On the other hand, 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 forms 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 1. Turnover by individual product according to business register, in 2000. Example

	52411 Retail sale of fabrics	52412 Retail sale of yarns and needle work supplie s	52413 Retail sale of househ old furnishi ngs of textile material s	52421 Retail sale of women' s clothing in speciali sed stores	52422 Retail sale of men's clothing in speciali sed stores	52423 Retail sale of furs and leather clothing	52424 Retail sale of children 's clothing	52425 Retail sale of hats and caps	52429 Retail sale of clothing in non- speciali sed stores	52431 Retail sale of footwea r	9301 Laun- dry ac- tivities	Other industri es	Record ed sale of retail trade excl. taxes, total
Turnover (FIM mill.)	432	98	261	723	153	108	141	21	4863	860	1247		
Distribution by product (%):													
C03 CLOTHING AND FOOTWEAR													
C031 Clothing													
C0311 Fabrics													
C03110SD Fabrics	30												
C0312 Garments													
C03121SD Outdoor clothing				77	77	90	77		77				
C03122SD Underwear				19	19		19		15				
C0313 Accessories and articles of clothing													
C03131SD Yarn, etc.	6	95											
C03132SD Hats, ties, scarves, gloves, etc.				4	4	10	4	100	3				
C0314 Garment repair and hire													
C03140S Garment repair and hire											60		
C032 Footwear													
C0321 Footwear and footwear supplies													
C03210SD Footwear and footwear supplies									3	96			
C0322 Footwear repair and hire													
C03220S Footwear repair and hire													
Distribution by product (FIM mill.):													
C03 CLOTHING AND FOOTWEAR													
C031 Clothing													
C0311 Fabrics													
C03110SD Fabrics	130	0	0	0	0	0	0	0	0	0	0	453	583
C0312 Garments													
C03121SD Outdoor clothing	0	0	0	556	118	97	108	0	3744	0	0	4 154	8 777
C03122SD Underwear	0	0	0	137	29	0	27	0	729	0	0	1 145	2 067
C0313 Accessories and articles of clothing													
C03131SD Yarn, etc.	26	93	0	0	0	0	0	0	0	0	0	223	342
C03132SD Hats, ties, scarves, gloves, etc.	0	0	0	29	6	11	6	21	146	0	0	354	572
C0314 Garment repair and hire													
C03140S Garment repair and hire	0	0	0	0	0	0	0	0	0	0	748	72	820

C032 Footwear															
C0321 Footwear and footwear supplies															
C03210SD Footwear and footwear supplies	0	0	0	0	0	0	0	0	0	146	826	0	1 151	2 123	
C0322 Footwear repair and hire															
C03220S Footwear repair and hire	0	0	0	0	0	0	0	0	0	0	0	0	76	76	

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 2. From turnover of establishment register to household final consumption expenditure in 2000. Example.

	Official sales of industry without tax	Tax-free purchases by non-EEA tourists	VAT %	Other taxes directly based on amount of purchases	Official taxable purchases of industries, total	Purchases not entered in relation to entered purchases	Household final consumption expenditure of sales	Household purchases of given industries	Household purchases from elsewhere	Household final consumption expenditure of sales in business register	Household final consumption expenditure of sales in business register	Comparison with FNA 2000 Household final consumption expenditure
	FIM mill.	FIM mill.		FIM mill.	FIM mill.	Proport'n	Proport'n	FIM mill.	FIM mill.	FIM mill.	mill. €	mill. €
C03 CLOTHING AND FOOTWEAR					18 711			16 924		16 952	2 851	2 851
C031 Clothing					16 031			14 335		14 363	2 416	2 416
C0311 Fabrics					711			375		375	63	63
C03110SD Fabrics	583	0	22		711		0,53	375		375	63	63
C0312 Apparel					13 206			12 854		12 854	2 162	2 162
C03121SD Outerwear	8 777	87	22		10 689		0,98	10 475		10 475	1 762	1 762
C03122SD Underwear	2 067	20	22		2 517		0,95	2 379		2 379	400	400
C0313 Suits, dresses & accessories					1 114			922		922	155	155
C03131SD Yarn, etc.	342	0	22		418		0,66	274		274	46	46
C03132SD Hats, ties, scarves, gloves, etc.	572	7	22		696		0,93	648		648	109	109
C0314 Repair and renting of apparel					1 000			185		213	36	36
C03140S Repair and renting of apparel	820	0	22		1 000		0,19	185	28	213	36	36
C032 Footwear					2 680			2 589		2 589	435	435
C0321 Footwear & footwear accessories					2 587			2 497		2 497	420	420
C03210SD Footwear &	2 123	13	22		2 587		0,97	2 497		2 497	420	420

footwear accessories												
C0322 Repair and renting of footwear					92			92		92	15	15
C03220S Repair and renting of footwear	76	0	22		92	0,05	0,95	92		92	15	15

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 to 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 Survey was produced in 1999 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 1998 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 2000 calculated for any individual material base, for example, rely on the certifiably correct consumption base level of 1998 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 2000 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:

Industry 1, Industry 2, Industry 3...
Output at basic prices
Distribution of output by product:
Product 1, product 2, product 3...
Distribution of product by use
Other use than consumption
Public final consumption expenditure
Final consumption expenditure of non-profit corporations

Household final consumption expenditure at basic prices
plus value-added tax and other taxes on products, net
= Household final consumption expenditure at purchasers' prices

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 consumption expenditure of all industries for the product in question
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:

Comparison and reconciliation in years when the Household Budget Survey is available:
Product 1 calculated by distribution method of output
plus/minus adjustments due to differences in base populations, etc.
= Product 1, Household Budget Survey data

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 2000 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 2000																		
	Value		Basic accountg method		Additional sources used														
	mill. €	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	8 002	x																	
C011 Food products	7 203	x																	
C0111 Bread products and cereal products	1 346	x																	
C01111ND Rice	31		x																
C01112ND Flour and grits	127		x		x		x												
C01113ND Potato flour	12		x																
C01114ND Bread	609		x																
C01115ND Pastry goods	448		x																
C01116ND Other cereal products	119		x																
C0112 Meat and meat products	1 630	x																	
C01121ND Meat of bovine animals	258		x				x	x		x	x								
C01122ND Meat of swine	185		x				x	x		x	x								
C01123ND Poultry meat	102		x				x	x		x	x								
C01124ND Mutton, venison, etc.	35		x					x											
C01125ND Game	51		x					x											
C01126ND Sausage	499		x				x												
C01127ND Tinned meat, processed meat and meat products.	411		x				x												
C01128ND Other meat products	89		x				x												
C0113 Fish and fish products	326	x																	
C01131ND Fresh fish	123		x					x	x										
C01132ND Tinned fish & fish products	203		x				x												
C0114 Milk, cheese and eggs	1 334	x																	
C01141ND Unproc. milk & producer consu.	12		x					x	x										
C01142ND Milk and milk powder	398		x				x		x										
C01143ND Sour milk products	264		x				x		x										
C01144ND Cream	75		x						x										
C01145ND Cheese	513		x				x												
C01146ND Eggs	72		x				x	x	x										
C0115 Oils and fats	205	x																	
C01151ND Butter & butter/veget. oil mixt.	100		x				x												
C01152ND Margarine	88		x				x												
C01153ND Other oils and fats	17		x				x		x										
C0116 Fruit	619	x																	
C01161ND Grower's fruit & orchard berries	22		x					x											
C01162ND Fresh fruit & orchard berries	472		x					x											
C01163ND Wild berries	37		x					x											
C01164ND Dried fruit, nuts, etc.	37		x							x	x								
C01165ND Fruit and berry preserves and preparations	51		x				x			x	x								
C0117 Vegetables	768	x																	
C01171ND Mushrooms	17		x					x	x										

Spirits	438 493.2
Other spirituous beverages	225 858.2
Fortified wines	533 69.73
Mild wines	473 510.7
Long drinks	639 88.11
Strong beer	711 15.07
Medium beer	834 790.8
Total (grouped by accounting heading):	2 161 126
C02110ND Alcoholic beverages, 1000 €	664 351
C02120ND Wine, cider, long drinks, 1000 €	590 869
C02130ND Beer, 1000 €	905 906
Share of retail consumption used by enterprises and institutions:	
C02110ND Alcoholic beverages	0.01
C02120ND Wine, cider, long drinks	0.01
C02130ND Beer	0.01
Retail consumption less consumption used by enterprises and institutions:	
C02110ND Alcoholic beverages, 1000 €	657 708
C02120ND Wine, cider, long drinks, 1000 €	584 960
C02130ND Beer, 1000 €	896 847
Alcoholic beverages imported by tourists, from separate calculations:	
Sales of alcoholic beverages on board vessels total in 1000 €, of which:	146 119
C02110ND Alcoholic beverages	78 679
C02120ND Wine, cider, long drinks	33 720
C02130ND Beer	33 720
Sales of alcoholic beverages on board aircraft 1000 €, of which:	5 629
C02110ND Alcoholic beverages	3 775
C02120ND Wine, cider, long drinks	1 522
C02130ND Beer	331
Sales of alcoholic beverages on board vessels & aircraft 1000 €, of which:	151 747
C02110ND Alcoholic beverages	82 455
C02120ND Wine, cider, long drinks	35 242
C02130ND Beer	34 050
Trade in illegally imported alcohol:	
Intoxicant statistics Table 2: Illegal distillation and transportation, millions of litres	1.88
Household purchases of amount, %	30
Household purchases of amount, millions of litres	0.56
Price of illegal spirits on street, estimate based on customs handouts (FIMI)	17.16
For household final consumption expenditure, 1000 €	9 673
Brewery statistics:	
Beer Max. 2,8 vol. %, domestic sales (including brewery imports) 1000 litres	12 420
Beer Max 2.8 vol. %, sales share purchased by households	0.75
Beer 2.8 vol. %, amount purchased by households, 1000 litres	9 315
Beer 2.8 vol. %, average price to consumer (€/litre)	1.59
Beer 2.8 vol. %, sales to households, 1000 €	14 830
Soft drinks, domestic sale, 1000 litres	294 553
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 1000 litres	2 946
Soft drinks containing alcohol (1.2-2.8 vol. %) average consumer price, €/litre	1.59
Soft drinks containing alcohol (1.2-2.8 vol. %) sales to households, 1000 €	4 690
Total of above:	
C021 Alcoholic beverages, mill. €.	2 321

C0211 Alcoholic beverages, mill. €	750
C02110ND Alcoholic beverages, mill. €	750
C0212 Wine, cider, long drinks, mill. €	625
C02120ND Wine, cider, long drinks, mill. €	625
C0213 Beer, mill. €	946
C02130ND Beer, mill. €	946

B/C022		
		2000
Tobacco statistics (National Agency for Welfare and Health & Statistics Finland):		
Retail sales value of tobacco products (including imports) delivered for taxable consumption, mill. €		995
Share of retail consumption used for entertainment		0.005
Value of share of retail consumption used for entertainment, mill. €		990
Tobacco brought by tourists, from separate calculations:		
On board vessels, mill. €		27
On board aircraft, mill. €		3
Tax-free total, mill. €		30
Trade in illegally imported tobacco: (An unofficial estimate from Customs: 10 % is confiscated, 90 % to illegal sale. Estimate of price is 40 % of normal price.)		
Estimate of illegal sales of cigarettes to households, mill €		4
C022 Tobacco, total mill. €		1 024

C03 CLOTHING AND FOOTWEAR

	Year 2000																		
	Value		Basic accountg method		Additional sources used														
	mill. €	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	2 851	x																	
C031 Clothing	2 416	x																	
C0311 Fabrics	63	x																	
C03110SD Fabrics	63		x						x	x									
C0312 Garments	2 162	x																	
C03121SD Outdoor clothing	1 762		x						x	x									
C03122SD Underwear	400		x						x	x									
C0313 Accessories and articles of clothing	155	x																	
C03131SD Yarn, etc.	46		x						x	x									
C03132SD Hats, ties, scarves, gloves, etc.	109		x						x	x									
C0314 Garment repair and hire	36	x																	
C03140S Garment repair and hire	36		x																
C032 Footwear	435	x																	
C0321 Footwear and footwear supplies	420	x																	
C03210SD Footwear and footwear supplies	420		x						x	x									
C0322 Footwear repair and hire	15	x																	
C03220S Footwear repair and hire	15		x																

C04 DWELLING, WATER, ELECTRICITY, GAS AND OTHER FUELS

	Year 2000																		
	Value		Basic accountg method		Additional sources used														
	mill. €	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	15 690	x																	
C041 Actual rents	3 987	x																	

household 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 51. Treatment of heating, water supply, refuse collection and waste water in the final consumption expenditure of dwellings and in the Industry '7021 Ownership and letting of dwellings'

	Industry 7021		Private consumption	
	Included	Economic activity	Included	Economic activity
Apartment blocks and 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	
	Included	Economic activity	Included	Economic activity
Detached small houses				
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 Table 51 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, FIM/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, FIM/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 to rental dwellings. (The 1998 Household Budget Survey contains a new item, repairs done by tenants, which 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 individual 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.

Household Budget Survey electricity is calculated from the item 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 Industry 7021 Gross rents. 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 Industry 7021 Gross rents.

C05 DECORATION, HOUSEHOLD EQUIPMENT & HOME MANAGEMENT

	Year 2000																		
	Value		Basic accountg method		Additional sources used														
	mill. €	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	2 964	x																	
C051 Furniture, interior decoration, carpets and other floor coverings	1 104	x																	
C0511 Furniture and interior decoration	925	x																	
C05111D Furniture and interior decoration	703		x																
C05112D Garden, etc. exterior furniture	35		x																
C05113D Lamps and lighting fittings	47		x																
C05114D Objets d'art	72		x																
C05115D Ornaments & furnishing articles, mirrors	68		x																
C0512 Carpets and other floor coverings	101	x																	
C05120D Carpets and other floor coverings	101		x																

C061 Medical products, equipment and instruments	1 128	x																		
C0611 Medicaments	761	x																		
C06110ND Medicaments	761																			
C0612 Other pharmaceutical products	33	x																		
C06120ND Other pharmaceutical products	33		x																	
C0613 Therapeutic equipment and instruments	334	x																		
C06131D Spectacles and contact lenses, prostheses and hearing aids	315		x																	
C06132D Other therapeutic equipment and instruments	19		x																	
C062 Open care services	776	x																		
C0621 Medical services	291	x																		
C06210S Medical services	291																			
C0622 Dental services	317	x																		
C06220S Dental services	317																			
C0623 Other open care services	168	x																		
C06230S Other open care services	168																			
C063 Hospital services	355	x																		
C0630 Hospital services	355	x																		
C06300S Hospital services	355																			

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/C0611			
		2000	
Sales of medicaments to households for open care, mill. €	+	1439	Data based on pharmacy industry sales of medicaments to households, Cf. Method A.
Compensation for medicaments, mill. €	-	678	
Household final consumption expenditure for medicaments, mill€		761	

Health care payments	
	2000
National Accounts Open care and hospital fees, total mill. €	1576
Social current transfers to the health services in the form of benefits in kind, mill. €	471
National Accounts Open care and hospital fees, total excl. compensation by the Social Insurance Institution (KELA), mill. €	1105
KELA: Structure of household open care and hospital fees:	
- medical services, %	25.8
- dental services, %	28.7
- other open care services, %	15.3
- hospital (ward) services, %	30.2
National Accounts Household final consumption expenditure, € mill.:	

C06210S Medical services	285
C06220S Dental services	317
C06230S Other open care services	169
C06300S Hospital services	334
Total	1105

C07 TRANSPORT

	Year 2000																		
	Value		Basic accountg method		Additional sources used														
	mill. €	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C07 TRANSPORT	8 686	x																	
C071 Purchase of vehicles	3 173	x																	
C0711 Motor cars	2 969	x																	
C07110D Motor cars	2 969			x (B/C0711)												x			
C0712 Motor cycles and snowmobiles	91	x																	
C07120D Motor cycles and snowmobiles	91		x													x			
C0713 Bicycles	113	x																	
C07130D Bicycles	113		x																
C072 Operation of personal transport equipment	3 967	x																	
C0721 Spare parts and accessories	600	x																	
C07211SD Tyres	183		x																
C07212SD Other spare parts or accessories	417		x																
C0722 Fuels and lubricants	2 487	x																	
C07220ND Fuels and lubricants	2 487			x (B/Transport)															
C0723 Maintenance and repair of personal transport equipment	531	x																	
C07230S Maintenance and repair of personal transport equipment	531		x																
C0724 Other services in respect of personal transport equipment	349	x																	
C07241S Hire of personal transport equipment without drivers	49			x (B/share of output)															
C07242S Hire of garages or parking spaces and road maintenance charges	117			x (B/share of output)															
C07243S Driving lessons	93			x (B/share of output)															
C07244S Roadworthiness, driving licence; and registration plate fees	90			x (B/share of output)															
C073 Transport services	1 546	x																	
C0731 Passenger transport by railway, tram and underground	265	x																	
C07310S Passenger transport by railway, tram and underground	265			x (B/Transport)															
C0732 Transport by bus and taxi	700	x																	
C07320S Transport by bus and taxi	700			x (B/Transport)															
C0733 Passenger transport by air	342	x																	
C07330S Passenger transport by air	342			x (B/Transport)															
C0734 Passenger transport by sea and inland waterways	186	x																	
C07340S Passenger transport by sea and inland waterways	186			x (B/Transport)															
C0735 Other transport services	53	x																	
C07350S Other transport services	53			x (B/share of output)															

B/C0711 Motor cars			
		2000	
	Data source		
FIRST REGISTRATIONS			
Registered, units	Statistics Finland: Motor vehicles	13 5243	
- of which for taxi traffic , units	Statistics Finland: Motor vehicles, motor vehicle registry, Department of Finance VAT calculations	58 129	
- of which for enterprises, communities and general government units		77 114	
- of which imports of tax-free passenger cars of returnees , no.	National Board of Customs	4396	
Remainder for households at full prices, units		72 718	
Regularly taxed, mill. €		1 688	
Imports of tax-free passenger cars of returnees , FIM mill.		46	
First registrations for final consumption expenditure, mill. €		1 734	
USED			
Purchased by households – sold, mill. €	Statistics Finland: Household Budget Survey	..	
Estimate for used, mill. €	Indicators: volume of registered and consumer price index	1 042	Level derived from Household Budget Survey, extended by means of registration volume and change in consumer price for used cars
BENEFIT IN KIND			
Fringe benefit motor car, total, mill. €		193	Benefits in kind are included in the NA wages and salaries. Total sum of benefits in kind has been split into final consumption products. The share of benefits in kind recorded into item "Motor cars" is reported here.
PRICES			
Household list price as new (FIM 1 000)	Motor car Information Centre and unit value	23.7	
Percentage of list price paid by households, %	Estimate	98	
Average price paid by households, FIM 1 000		23.2	
C07110D Motor cars, mill. €		2 969	

The B/Transport 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. Examples of the use of the method are shown here.	
x (B/Transport)	
Example: Passenger transport by sea and inland waterways	
	2000
Profit on passenger transport by sea and inland waterways:	
Passenger income from domestic transport, 1000 €	13 780
- of which household final consumption expenditure, %	85
Passenger income from Finnish vessels operating in rest of world, 1000 €	204 158
- of which household final consumption expenditure, %	85
Household final consumption expenditure:	
Domestic passenger transport, 1000 €	11 713
Taxes on domestic passenger transport (2000:8%), 1000 €	937

C09423S Services of photographers such as film developing, portrait and wedding photography, etc.	99		x																	
C09424S Other cultural services	280			x (B/share of output)																
C0943 Games of chance	1 184	x																		
C09430S Games of chance	1 184			x (B/C0943)																
C095 Newspapers, books and stationery	1 213	x																		
C0951 Books	260	x																		
C09510SD Books	260		x																	
C0952 Newspapers and periodicals	829	x																		
C09520ND Newspapers and periodicals	829			x (B/C0952)																x
C0953 Miscellaneous printed matter	74	x																		
C09530ND Miscellaneous printed matter	74		x																	
C0954 Stationery and drawing materials	50	x																		
C09540ND Stationery and drawing materials	50		x																	
C096 Package tours	770	x																		
C0960 Package tours	770	x																		
C09600S Package tours	770			x (B/Transport)																

x (B/C09142&C09421)		
		2000
Source: Statistics Finland/Finnish Mass Media		
Recorded videos and dvd:s		
For hire, mill. €	26	
- of which for households, %	100	
- of which for households, mill. €	26	
Purchased, mill. €	59	
- of which for households, %	76.5	
- of which for households, mill. €	45	
Illegally purchased as a percentage of legally purchased, %	2	
Addition: Illegally purchased, mill. €	1	*) 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
Other recordings:		
Retail sales, total, mill. €	125	
- of which for households, %	76.5	
- of which for households, mill. €	96	
Illegally purchased as a percentage of legally purchased, %	2	
Addition: Illegally purchased, mill. €	2	*)
Unrecorded recording equipment:		
Sound cassettes, etc., mill. € (Households)	4	
Video cassettes, etc., mill. € (Households)	32	
Television and video equipment for hire, % of video recording rents	8	
C09142SD Records, audio and videocassettes	180	
C09421S Hire of televisions, videos, etc.	28	

x (B/C09422)		
	2000	
Number of television licences, '000	1 999	Source: YLE Broadcasting Company Annual Report
Annual television licence fee, €	158	Based on a Government statute
Imputed television licence fees accruing annually, mill. €	316	
Television licences collected , mill. €	316	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	2 373	Statistics Finland: Income distribution statistics and Household Budget Survey
Households owning one or more televisions, %	95	Statistics Finland: Finnish Mass Media
Households owning one or more televisions, '000 households	2 254	
Households owning a television but no licence, %	17	FICORA television licence administration's estimate
Households owning television licences, '000	1 871	
Household share of all television licences, %	94	
Household television payments, total mill. €	295	
Cable television activities:		
(Part of expenditure reflected in rental payments)		
Pay-per-view TV income (part of turnover of Cable TV companies)	21	Statistics Finland: Finnish Mass Media
Pay-per-view TV, VAT %	22	
Pay-per-view TV as taxed, total mill. € (households 100%)	26	
Other television payments		
Other payments by households (incl. interactive programmes)	3	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). mill. €	4	
Total, mill. €	325	

x (B/C0943)			
			2000
Finnish Slot Machine Association (RAY)			
Turnover from casinos and gaming machines, mill. €	+		539
Åland Slot Machine Association (PAF)			
Turnover from PAF concern, mill. €			37
-of which gaming machines in Finland's territorial area (especially in Åland) incl. ships, %			10
-for final consumption expenditure mill. €	+		4
Estimate of amount of Finland's final consumption expenditure going on PAF Internet games	+		2
Turnover of other PAF type gaming practices in Finland's territorial area (especially in Åland)	+		0.2
- deduct the value of winnings from the above	-		0.1
Gaming machines on board ship (not operated by RAY/PAF)			
From separate calculations of transport on sea or inland waterway, mill. €	+		6
(Veikkaus Oy)			
Gaming turnover, mill. €	+		1083
Players' winnings, mill. €	-		505
Hippos of Finland ry (known as Fintoto Oy since 1.1.2001)			
Turnover of tote gambling, mill. €	+		119
Players' tote winnings, mill. €	-		89
Bingo			
Turnover, mill.€	+		91

Value of winnings in relation to turnover, %		73
Value of winnings, mill. €	-	66
Household final consumption expenditure, mill. €	=	1 184
x (B/C0952)		
		2000
Sources: Statistics Finland/Finnish Mass Media (and its basic data sources)		
NEWSPAPERS		
Newspapers, turnover, mill. €		1 078
- of which 7-4 days per week		965
- of which 3-1 days per week		114
Distribution of newspaper profits:		
7-4 days per week		
Subscriptions and single copy sales, %		44
3-1 days per week		
Subscriptions and single copy sales, %		38
Subscriptions and single copy sales, %, mill. €		
7-4 days per week		424
3-1 days per week		43
Total		468
Structure of newspaper sales		
Subscriptions, %		85
Single copy sales, %		15
Subscriptions, mill. €		397
Single copy sales, mill. €		70
Finnish newspaper subscriptions		
Household share of subscriptions, %		86
Household share of subscriptions, mill. €		342
Value-added tax, %		0
Subscriptions to newspapers (households), mill. €		342
Subscriptions to rest-of-the-world newspapers::		
Subscription to rest-of-the-world newspapers (households), mill. €		2
VAT %		0
Subscription to rest-of-the-world newspapers (households), mill. €		2
Newspapers purchased as single copies:		
VAT %		22
Finnish newspapers purchased as single copies, mill. € (includes value-added tax):		105
- of which purchased by households, %		97.5
Newspapers purchased as single copies by households, mill. €		103
Household expenditure on newspapers, total, mill. €		446
PERIODICALS		
Periodical turnover, mill. €		631
Distribution of profits:		
Subscription payments, %		64
Single copy sales, %		8
Advertising revenue, %		28
Subscriptions and single copy sales, profits, mill. €		
Subscriptions, mill. €		404
Single copy sales, mill. €		50
Finnish periodical subscriptions:		
- of which purchased by households, %		66.5
- of which purchased by households, mill. €		268

Value-added tax, %	0
Finnish periodical subscriptions (households), mill €	268
Subscription to rest-of-the-world newspapers (households:	
Finnish household subscriptions to rest-of-the-world periodicals, mill. €	3
Value-added tax, %	0
Subscriptions to rest-of-the-world periodicals (households), € million	3
Single copy sales of periodicals:	
Value-added tax, %	22
Finnish periodicals purchased as single copies, mill.€ (incl. VAT):	123
- of which purchased by households, %	90
Periodicals purchased as single copies by households, € million	111
Household periodical expenditure, total, € million	382
Household newspapers and periodicals, total, mill. €	828

C10 EDUCATION

	Year 2000																			
	Value		Basic accountg method		Additional sources used															
	mill. €	Total level	Method A	Method B/...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C10 EDUCATION	298	x																		
C100 Education	298	x																		
C1000 Education	298	x																		
C10000S Education	298			x (B/share of output)																

x (B/Share of output) Example: Final consumption expenditure group "C10000S Education" gathered from industry data	
a) Enterprises, SIC 80 Education	
Output at basic prices, 371 mill. €	
Distribution of output by products:	
Driving tuition, 76 mill. €	Other education 295 mill. €
- of which	
Household final consumption expendit. at basic prices, 76 mill. €	Household final consumption expendit. at basic prices, 97 mill. €
Transfer at purchasers' prices:	
Value-added tax and other taxes on products, net 17 mill. €	Value-added tax and other taxes on products., net 11 mill. €
Household final consumption expenditure at purchasers' prices 93 mill. €	C10a) Household final consumption expenditure at purchasers' prices 108 mill. €
b) Non-profit institutions serving households, SIC 80 Education	
Output at basic prices, 844 mill.€	
of which:	
Market output, 73 mill. €	
Sales of non-market products, 126 mill. €	
Distribution of output by products:	
Education, 844 mill. €	
of which	
Household final consumption expenditure at basic prices, 126 mill. €	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products, 0 mill.€	
C10b) Household final consumption expenditure at purchasers' prices, 126 mill.€	

c) General government, SIC 80 Education	
Output at basic prices, 1706 mill. €	
of which	
Market output, 224 mill.€	
Sales of non-market products, 0 mill.€	
Distribution of output by products:	
Education	
of which:	
Household final consumption expenditure at basic prices, 12 mill.€	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products net, 3 mill.€	
C10c) Household final consumption expenditure at purchasers' prices, 15 mill.€	
d) Local government, SIC 80 Education	
Output at basic prices, 4745 mill.€	
of which:	
Market output, 232 mill.€	
Sales of non-market products, 61 mill.€	
Distribution of output by products	
Education	
of which:	
Household final consumption expenditure at basic prices, 45 mill.€	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products net, 0 mill.€	
C10d) Household final consumption expenditure at purchasers' prices, 45 mill.€	
e) Local government, SIC 751 Public Administration	
Output at basic prices, 4041 mill.€	
of which	
Market output, 1391 mill.€	
Sales of non-market products, 153 mill.€	
Distribution of output by products:	
Education	
of which:	
Household final consumption expenditure at basic prices, 4 mill.€	
Transfer at purchasers' prices:	
Value-added tax and other taxes on products net, 0 mill. €	
C10 e) Household final consumption expenditure at purchasers' prices 4 mill.€	
C10000S Education	
Household final consumption expenditure of output	
C10a) Enterprises, SIC 80 Education	108
C10b) Non-profit institutions serving households, SIN 80 Education	126
C10c) Central government, SIC 80 Education	15
C10d) Local government, SIC 80 Education	45
C10e)) Local government, SIC 751 General government	4
TOTAL	298 mill. €

C11 HOTELS AND RESTAURANTS

	Year 2000		
	Value	Basic accountg method	Additional sources used

	mill. €	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	4 369	x																	
C111 Hotel and catering services	4 025	x																	
C1111 Restaurants, cafeterias	3 353	x																	
C11110S Restaurants, cafeterias	3 353			x (B/C11)															x
C1112 Canteens	672	x																	
C11120S Canteens	672			x (B/C11)															x
C112 Accommodation services	344	x																	
C1120 Accommodation services	344	x																	
C11200S Accommodation services	344			x (B/C11)															x x

x (B/C11)			
Industry		2000	
H	Hotels and restaurants		Sources:
	Output, mill. €, excl. value-added tax, got from National Accounts Production account	4 333	National Accounts Production accounts, Hotel and Restaurant Assoc., s Assoc.) Statistics Finland tourism statistics, etc.
551	Accommodation services Hotels		
	Output, mill.€, excl. value-added tax, got from National Accounts Production account	1 335	
	- of which accommodation sales, %	40.3	
	- of which restaurant sales, %	59.7	
	- of which accommodation sales (Heading C11200S), € million excl. value-added tax	538	
	- of which restaurant sales (Heading C11110S), € million excl. value-added tax	797	
	Household share of accommodation sales, %	59.2	
	Household share of restaurant sales, %	77.5	
	Heading C11200S Accommodation services, € million excl. value-added tax	318	
	Heading C11110S Restaurants and cafeteria services, mill. € excl. value-added tax	618	
553	Restaurants		
	Output excl. value-added tax, to be found in SKT95 Production account	2 998	
	Household share of sales, %	78	
	Household share of sales, mill. € excl. value-added tax	2 340	
	- of which heading C11120S Canteens, %	17	
	- of which heading C11110S Restaurants and cafeteria services, %	83	
	Heading C11110S Canteen services, mill. € excl. value-added tax	409	
	Heading C11110S Restaurants and cafeteria services, mill. € excl. value-added tax	1 931	
Other	Restaurant services from other industries (separate calculations)		
	Local government		
	Payments for meals	98	
	Central government		
	Payments for meals	27	
	Non-profit institutions		
	Payments for meals	10	
	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	7	
	Restaurant services by sea and inland waterways		
	- of which household final consumption expenditure, mill. €	243	
	TRANSFER AT PURCHASERS' PRICES (taxable items increased by appropriate VAT %).		
	Price of untaxed accommodation service increased by increment in accordance with VAT	1.08	
	C11200S Accommodation services, mill. €	344	

	Price of untaxed restaurant service increased by increment in accordance with VAT	1.22
	C11110S Restaurants, cafés and the like, mill. €	3 353
	Price of untaxed staff canteen service increased by increment in accordance with VAT	1.22
	C11120S Canteens, mill. €	672
	C111 Catering services, mill. €	4 025
	TOTAL:	
	C11 RESTAURANTS AND HOTELS, mill. €	4 369
	C111 Catering services, mill. €	4 025
	C1111 Restaurants, cafés and the like, mill. €	3 353
	C11110S Restaurants, cafés and the like, mill. €	3 353
	C1112 Canteens, mill. €	672
	C11120S Canteens, mill. €	672
	C112 Accommodation services, mill. €..	344
	C1120 Accommodation services, mill. €	344
	C11200S Accommodation services, mill. €	344

C12 MISCELLANEOUS GOODS AND SERVICES

	Year 2000																				
	Value		Basic accountg method		Additional sources used																
	mill. €	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	4 614	x																			
C121 Personal beauty treatment services	1 217	x																			
C1211 Hairdressing, etc. and personal cleanliness services	476	x																			
C12110S Hairdressing, etc. and personal cleanliness services	476			x (B/share of output)																	
C1212 Electric hair dryers, electric shavers, and other electrical appliances	32	x																			
C12120D Electric hair dryers, electric shavers, and other electrical appliances	32		x										x								
C1213 Other personal cleanliness services	709	x																			
C12131ND Cosmetic and toilet services	414		x																		
C12132ND Toilet paper, handkerchiefs and the like	100		x																		
C12133ND Baby's nappies, sanitary towels, cotton wool	117		x																		
C12134SD Combs, hairbrushes, shaving equipment, toothbrushes	78		x																		
C122 Prostitution	40	x																			
C1220 Prostitution	40	x																			
C12200S Prostitution	40			x (B/share of output)																	
C123 Personal goods n.e.c.	377	x																			
C1231 Jewellery and clocks	219	x																			
C12311D Jewellery	151		x																		
C12312D Wrist watches, pocket watches, wall clocks and the like	55		x																		
C12313S Repair of jewellery, clocks and watches	13		x																		
C1232 Other personal goods	158	x																			
C12321SD Bags, purses, wallets	80		x																		
C12322SD Perambulators, strollers, safety seats	31		x																		
C12323SD Umbrellas, sunglasses, smoker's paraphernalia	47		x																		
C124 Social security	795	x																			
C1240 Day care, institutional and other	795	x																			

Output at basic prices 451 mill. €	
Distribution of output by products:	
Hairdressing, etc. personal cleanliness services 373 mill. €	Burial and other services 69 mill.€
- of which:	
Household final consumption expenditure at basic prices, 369 mill. €	Household. final consumption expenditure at basic prices, 69 mill.€
VAT and other taxes on products net, 81 mill. €	VAT and other taxes on products net, 0 mill.€
Household final consumption expenditure at purchasers' prices, 450 mill. €	Household final consumption expenditure at purchasers' prices, 69 mill.€
Industry products allocated to household final consumption expenditure:	
From industry "9309 Other personal services"	
C12110S Hairdressing, etc. personal cleanliness services	450 mill.€
C12700S Others services n.e.c.	69 mill.€

P311Y-P3Y SUMMARY ITEMS AND BALANCING ITEMS

	Year 2000																			
	Value		Basic accountg method		Additional sources used															
	mill. €	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	61 893	x																		
D DURABLE GOODS	6668	x																		
SD SEMI-DURABLE GOODS	5 488	x																		
ND NON-DURABLE GOODS	18 471	x																		
S SERVICES	31 266	x																		
TUR TOURISM EXPENDITURE	-159	x																		
P312Y Consumption expenditure of resident households in the rest of world	1 369			x (B/TUR)																
P313Y Consumption expenditure of non-resident households in Finland	1 528			x (B/TUR)																
P31Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS	61 734	x																		
P32Y Consumption expenditure of non-profit institutions	2 752			x (B/P32Y)																
YSU PRIVATE CONSUMPTION EXPENDITURE IN FINLAND	64 645	x																		
P3Y PRVATE CONSUMPTION EXPENDITURE	64 486	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).

x (B/TUR)		
	2000	
Final consumption expenditure by Finns in rest of world, mill. €	2009	Source: Rest of the world sector of the national accounts.; Statistics Finland, Travel by Finns
Business trips (including overnight accommodation in country of transaction)		Source Statistics Finland, Travel by Finns
Journeys including overnight accommodation in country of destination,	902000	Source Statistics Finland, Travel by Finns
- of which overnight accommodation on average	5,6	Source Statistics Finland, Travel by Finns
Business trips in days, total	5051200	
Leisure trips (including overnight accommodation in country of transaction)		Source Statistics Finland, Travel by Finns
Journeys including overnight accommodation in country of transaction	2397000	Source Statistics Finland, Travel by Finns
- of which overnight accommodation on average	7.8	Source Statistics Finland, Travel by Finns
Leisure trips in days, total	18 696 600	
Business trips and leisure trips in days, total	23 747 800	
- of which business trips in days, share (/1)	0.21	
- of which leisure trips, share (/1)	0.79	
- of which business trips, mill. €	427	
Difference: final consumption expenditure by Finnish households in rest of world, mill.€	1 582	
Hotel expenses included in package tours to rest-of-world,, mill.€	213	Information based on separate investigation. Contains household final consumption expenditure under Heading C09600S Package tours
Remainder: household final consumption expenditure minus hotel expenses incl. in package tours in rest of world mill. €	1 369	
TUR TOURISM EXPENDITURE	-159	
P312Y Consumption expenditure of resident households in the rest of world	1 369	
P313Y Consumption expenditure of non-resident households in Finland	1 528	Source: Border interview survey

P31Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS

=P311Y CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND + TUR TOURISM EXPENSES

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 other non-market output 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 programmes are produced for own final use. Such programmes 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

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 what the National Board of Education collects and from the register maintained at the University of Tampere's Computer Centre (the so-called cost of education register).

The Education economic statistics' item "Other profits" is counted as the market output of the education industry. The Education economic statistics' 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 training register is related to the wages and salaries total of the education industry and 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 local authorities and local government regional 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 estate⁶ 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.

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.

Computer software produced solely on own account is output for own final use (cf. Section 5.11.2.).

⁶ Based on a calculation published in Helsingin Sanomat on 22.11.1999, Page B10.

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).

In 1997-1999, there was no differentiation between internal and external rental income in municipal statistics. Instead, the item 'Rental income' included both. Only external rental expenditure is taken into account in municipal calculations in the national accounts and so the share of external rental expenditure for these years is estimated using the distribution for financial statistics in 2000 (Cf. item 3.18.2 intermediate consumption).

Output for own final use (P12) includes own-account produced EDP software, building construction and development by municipal institutions. Figures for EDP 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 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 Central Pension Security Centre 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 52: D63K Social transfers in kind.

D63K SOCIAL TRANSFERS IN KIND					
FIM million	1995	1996	1997	1998*	1999*
Social security benefits in kind					
Medicaments	2 706.9	3 001.5	3 288.1	3 358.6	3 634.7
Medical services	300.5	338.6	338.2	347.5	346.9
Dental services	168.6	172.1	189.7	247.9	235.1
Diagnosis and care	265.2	305.3	315.8	342.0	334.2
Transport and ambulance transport	469	528.3	549.1	574.3	590.0
Health care compensation, total	3 910	4 346	4 681	4 870	5 141
Individual rehabilitation	722.6	752.1	806.3	916.5	1 006.6
(Rehabilitation cash; not treated as a benefit in kind)	277.3	243.3	229.6	208.0	216.1
(Individual rehabilitation benefits, total)	999.9	995.4	1 035.9	1 124.5	1 222.7
Social security benefits in kind, total	4 632	5 098	5 487	5 787	6 148

Social assistance benefits in kind

Maternity allowance packages	43.0	40.8	42.9	40.0	41.3
Subsidy for travel to/from school (dating from 1.7.1997)			44.1	123.3	132.2
Travel costs for war veterans undergoing rehabilitation	2.7	3.1	2.9	3.5	3.6
Compensation for occupational conditions reports from agricultural self-employed persons	2.0	1.8	1.9	2.0	4.1
Compensation for bed and board		87.9	109.7	112.1	122.9
Social assistance benefits in kind, total	47.7	133.6	201.5	280.9	304.1

Social transfers in kind, total	4 680	5 232	5 689	6 068	6 452
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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. The subgroup "Transport equipment, machinery and equipment" is divided into many subindustries, transport equipment, on the one hand, and other machinery and equipment, on the other. Only part of this subdivision is explained in this description.

5.10.1 Residential buildings

All investments in residential buildings (including holiday home investments) are included in the national accounts in the market production industry 'Ownership and renting of dwellings' (7021). 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 contains 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 is often based on the same data sources. Therefore, calculations of investments in the two next sections (5.10.3. and 5.10.4.) will be explained also.

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.

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".

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 the agriculture and fishing industry. The amount 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 were 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 includes 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 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. The difference between the opening and closing balance is adjusted by adding depreciation and capital loss, deducting capital gains and possible revaluation.

The accounts used in the calculation of investments cannot always be allocated to individual types of investment goods. Such situations are resolved separately by investigating the type of goods at the general accounts office. Value-added tax on investments is then added to capital goods.

Additionally, added to the Road development industry are fixed capital asset investments for the purpose of so-called fixed asset investments as civil engineering investments during construction of the E75 Route with private funds. Construction of the route is equated with financial leasing. It involves Finland's first private road construction project, built by the Nelostie road company. The State and Nelostie Oy signed a contract to develop the road according to which the latter will design, build, finance and be responsible for maintaining the road until August 2012. Nelostie will then hand over the road gratis to the Road Administration (the State). The Road Administration (the State) will pay an annual fee to Nelostie Oy for supplying the service, based mainly on frequency of use.

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, nor are items that are intended for civilian use 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 Human health and social work activities, 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 project 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 in Section 5.10.2. below. 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. For docks, calculation is based on data in local authority financial statistics and for airports on financial statement data from the National Board of Aviation.

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 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

Made clear 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 Navigation 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 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 ponies. 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 company statistics surveys.

Special survey of company 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 FIM 674 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 FIM 114 million, of which 84% was spent on the former group. In terms of 1995 figures, 84% (or FIM 566 million) of the FIM 674 million spent on "Mapping, soil and waterway research" was spent 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 FIM 232 million out of FIM 566 million. Export, construction, general government and trade accounted for the other 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 (FIM 232 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 FIM 45 million, which reflects the amount of measuring, mapping and geotechnical services purchased by manufacturing. Subtracting this figure from FIM 232 million, leaves FIM 187 million.

This FIM 187 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.

5.11.2. Computer software

The value of computer software investments at basic prices is first calculated at the aggregate level by using the flow of goods method. Imports are added to domestic production of software and exports and consumption are deducted (less value-added tax). The residual represents computer software investments. This is divided into three parts: software bundled with the equipment, production for own use and separately purchased software. Bundled software is calculated by the flow of goods method and production for own use is also

investigated separately, leaving separately purchased software as the residual. The latter two together are software investments. Following this calculation, production for own use and separately purchased software are broken down among different industries.

Domestic production and imports

Domestic production is calculated as the total of data processing services, technical services and manufacturing production for the service in question. To this is added production for own use. Production of data processing services is calculated as a percentage of systems development, consulting and programme production for the whole industry. A separate report on this subject was produced in 1995. Production of technical services is calculated based on the percentage of production of industry software compared to total production about which a separate report also exists. Manufacturing production is calculated from statistics on the production of goods. Calculation of the item "Output produced for own final use" will be clarified separately below.

Imports are calculated as the total of goods and services imported. Imports of goods are to be found in the National Board of Customs foreign trade statistics as the total for the categories of goods in question. Imports of services is equivalent to imports of computer services as found in the balance of payments statistics. It includes technical services and management planning operations, both of which are deducted.

Exports and consumption

Exports are calculated as the total of goods and services exported. Exports of goods are to be found in the foreign trade statistics of the National Board of Customs as the total of the categories of goods in question. Exports of services are obtained by estimating the exports share in the turnover of computer and related activities. The share of off-the-shelf software is deducted from this total while the software exports of the technical activities enterprises are added to it.

Consumption is obtained separately as the total of software purchased separately or bundled with equipment. The former is obtained directly from the household budget Household Budget Survey. The share of software contained in the hardware purchased by computer and related activities enterprises is relied on to obtain an estimate of the value of bundled software and this figure is multiplied by the number of households purchasing such equipment.

Purchases of software bundled with equipment

In this instance, the basis used is the share of software in the purchased bundle from computer and related activities enterprises, multiplied by investments of enterprises in computer equipment. The amount of investments is obtained using the flow of goods method by deducting the total of exports and consumption from the total of production of equipment and imports.

Output for own final use and separately purchased software

Own-account produced computer software is evaluated according to production costs (ESA 3.113). The number of programmers, computer designers and other information technology experts and the wages and salaries paid to them in each industry was established on the basis of the 1995 wages and salaries structure

statistics. Employers' social contributions and overheads, i.e. expenses related to compensation of employees, are added to wages and salaries. The total was carried forward each year adjusted for the average increment in the wages and salaries of systems designers, computer designers and programmers as obtained in "Wages and salaries in the Service Sector" published by Statistics Finland multiplied by the rise in the number of employees. Overheads were omitted from the general government sector and KELA data was used directly in the case of compulsory social security funds. Own-account produced computer software is not valued at the corresponding value of capital goods sold on the market at basic prices, which would entail an increase in the net operations surplus (ESA 3.113, 3.49)

Separately purchased software remains as a residual in aggregate calculations. This residual is broken down among industries based on a special report made in 1996 ("Computer Service Enterprises 1996").

Starting in 1998 enterprise based data are available in structural business statistics of investments in computer software. These data will be utilised in future both at the overall level and to define industry levels. In structural business statistics, the value of own-account produced capital goods is calculated on the basis of production costs.

The development of estimates for measuring software originals according to the recommendations of the Eurostat working group is still being investigated.

COMPUTER SOFTWARE INVESTMENTS, FIM millions	
	1995
DOMESTIC PRODUCTION	5 470
Production of the computer and related activities industry	3 135
Production of technical services	91
Production of manufacturing industries	42
Production for own final	2 202
IMPORTS	3 587
Imports of goods (Foreign trade statistics)	374
Imports of services (Balance of payments)	3 213
SUPPLY, TOTAL	9 057
EXPORTS	187
Exports of goods	66
Exports of services	121
CONSUMPTION	161
Separately purchased	48
Purchased bundled with equipment	113
INVESTMENTS IN COMPUTER SOFTWARE	8 709
Of which purchased bundled with equipment	1 524
OF WHICH PRODUCTION FOR OWN	2 202
OF WHICH SEPARATELY PURCHASED SOFTWARE	4 983
COMPUTER SOFTWARE INVESTMENTS, TOTAL	7 185

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.

Literature

An estimate of royalties paid in 1998 (FIM 200 mill.) was obtained from the Finnish Book Publishers Association. Copying fees from the Kopiosto annual report were added to this (FIM 0.5 mill.).

Motion pictures and videos

The 1998 turnover (FIM 641 million) of the industry (Motion picture and video activities 9211) was to be found in the business register. This comprises advertising footage of roughly 35% (Mass Advertising Statistics 1999). Investments amounted to FIM 417 million.

Music

The 1998 turnover (FIM 376 million) of Industry 2214 "Recordings, publishing" was to be found in the business register.

Television and radio productions

The Finnish Broadcasting Company (Yleisradio) is in practice the only interest group that can regard itself as producing television and radio productions which are classed as original works of art and entertainment. The Company's annual reports are used as a source. The value of original works of art and entertainment produced for television and radio in 1998 was estimated at FIM 234 million.

In 1998, the Finnish Broadcasting Company produced 153 hours of televised drama programmes and 200 hours of children's programmes. The average price of televised drama programmes was FIM 987 000 per hour and of televised children's programmes FIM 338 000 per hour, giving a total television production value of FIM 219 million.

Radio productions include plays, scientific and educational programmes, children's programmes and documentaries. The annual hours broadcast by various channels, average price per hour, and the share of broadcasting time given to these productions are to be found in the annual report. The total value of original works in 1998 was calculated through this data at FIM 15 million.

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 four industries: Agriculture (013 Growing of crops combined with farming of animals), Logging (0212), Mining and quarrying of energy producing materials (10) and Activities of religious organisations (9131).

Major improvements in agriculture include subsoil drainage. The industry organisation Subsoil Drainage Centre 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 logging industry.

In the energy mining industry, investments in land and other major improvements occur only in the subindustry "Peat digging and peat

agglomeration " (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 refers 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 not divided according to industry. Instead, it is recorded under Industry "Industry unknown" (999).

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: 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. 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 manufacturing. Average pricing of goods for resale in opening and closing stocks is carried out using the aggregate index of the domestic market's basic price index. Opening and closing stocks of fuels are turned into average prices by means of the subitems "Coal, nuclear fuel and petroleum products" in the domestic market's basic

price index. The opening and closing stocks of other materials and supplies (mainly raw materials) are changed into average prices by industry by means of the domestic market's basic price index.

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).

5.13.3 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 Building Cost Index. Price indices for materials are used to average prices in civil engineering.

Table 52. Additions to inventories for Construction of buildings and Civil engineering , million

	Construction of buildings	Civil engineering	Total
P5219S Other materials and supplies	11	-4	7

5.13.4 Wholesale and retail trade and hotels and restaurant activities

Data on changes in inventories are to be found 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 domestic market's basic price index.

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 lot 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.

5.13.5 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

Acquisitions less disposals of valuables are not yet recorded in statistics in the national accounts because data on them are available only to a very limited degree. The foreign trade statistics include data on the import and export by country, in accordance with the Combined Nomenclature (CN), of art works, collections and antiques CN Heading 97, import and export of jewellery and pearls, CN Heading 71, and import and export of watches and clocks, CN Heading 91. At present, import and export of valuables is included in imported goods and exported goods. Imported valuables are generally included in final consumption expenditure. Central government possesses data on the acquisition of valuables but in the absence of data from other sectors, these are recorded as gross fixed capital formation.

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 (extra trade), are to be found in customs documents. Data on trade between Member States (intra trade) are collected by means of a method called the INTRASTAT system. The customs authorities collect both extra and intra trade data. Importers and

exporters provide the required statistical data about intra 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 intra and extra trade statistics.

Intra 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 intra trade are defined in 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 2000 is FIM 600 000. The aggregate value data of the intra 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 1999 was 0.8% of all goods exported and 2.5% 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 *inter alia* data on the import and export of valuables.

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. Exports of goods are valued at f.o.b. prices in customs foreign trade statistics 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. This practice is based on ESA 95, Paragraphs 3.133 c and 3.136 d. The former states that "Goods for significant processing to order or repair are recorded both in imports and exports, although no change of ownership occurs". The latter states that "Goods imported and exported exclude ... equipment and other goods which are sent abroad for minor processing, maintenance, servicing or repair". Including goods to be processed increased exported goods by 1-2%. 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. In our opinion, foreign trade statistics in this respect contain a systematic error at present, because the statistical value of the goods is less after the adjustment than before. This matter needs to be clarified before the data can be used in the national accounts.

Two items are added to goods imported and exported: gifts given and received.

The adjustment items do not contain the value of contraband imported goods. Because there is an item by this name in households' final consumption expenditure, it also needs to be added to imported goods.

Example: Goods exported and imported in 1995.

1) Goods exported in 1995 = FIM 176 021+180+72+96+360+72 million = FIM 176 801 million. The first 176 021 million represents goods exported in customs statistics, 180 million and 72 million represent bunker oil, 96 million represents small customs clearances, 360 million represents exchange rate adjustments and 72 million represents gifts received.

2) Goods imported in 1995 = FIM 128 556+285+204-192-6299+36 million = FIM 122 590 million. The first 122 556 million represents goods imported in customs statistics, 285 million and 204 million represent bunker oil, -192 million represents exchange rate adjustments and 6 299 million represents import freight and insurance charges and 36 million represents gifts given.

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.

Finland is going through a transition stage with respect to foreign trade data about services. 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. In addition, foreign trade services expenditure was calculated and estimated on the basis of given data and fixed estimates.

To replace data contained in the discontinued foreign payments system, a statistical survey was initiated in Statistics Finland applying to statistical year 1999. Transport and insurance services, from whom data about foreign trade applying to 1999 were obtained as before, were excluded from the survey. Also

excluded were services, which very probably aimed at domestic customers alone. The target group is enterprises which engage in foreign trade 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 1998, produced by the structure of enterprises unit, and customs data on enterprises. Allowing for exclusions, the data was divided into two frameworks. A complete inquiry was conducted into the first and a random inquiry into the second. A total of 2 101 enterprises came within the scope of the survey. In the follow-up, experience and data obtained from the first survey were 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 a tourism survey for the resident population. It is supplemented by international air and sea transport statistics and other relevant statistics.

In 1999 a total of 22 000 foreign visitors were interviewed at the border about cash spending of whom 15 000 were selected as a sample. Material was gathered around the clock at key air and shipping terminals, at border crossings in the south-east and on trains between Finland and Russia. In summer, data were gathered on the ferries connecting Vaasa and Sweden and traffic crossing the border in Northern Finland. Individuals conducted the surveys at border interviews. Three-way stratification was used to select sample subjects based on collection points, survey dates and time of day. During the interview period, targeted subjects were chosen by systematic selection at between five and 20 locations, depending on the season. Survey dates and periods were chosen at random. Spending data in the sample were completed by a sample aimed at nationals of Member States, few of whom visit Finland.

The primary source for travel expenditure is the Finnish travel survey which contains data required by the European Union directive on tourism statistics about the demand for tourism services and costs incurred travelling. The survey was conducted as a sample survey four times in 1999 in conjunction with the Labour Force Survey. Different people were interviewed each time. Roughly 2 000 persons in the 15-74 age bracket were chosen by systematic sampling from a central register for each sample. The non-response rate averaged roughly 10%. Since the Finnish travel survey addresses quite a small sample, the data it contains about foreign travel by country of transaction are not very accurate. In addition, the survey applies only to journeys by persons in the 15-74 age bracket. Consequently, the numbers of journeys were adjusted by the use of other statistics reflecting travel, such as data collected by the Association of Finnish Travel Agents (SMAL) for package tours and international travel statistics by air and sea. In addition to the above, statistics collected by the Border Guard Service about travel across the European Union's international boundary were used, in which travellers are identified by nationality.

Transport services

Data on imports and exports of transport services are obtained by separate surveys. Data applying to imports and some exports of transport services by sea are derived mainly from statistics for "Foreign income and expenditure in shipping", compiled by Statistics Finland's Business trends -unit. In addition, expenditure on freight is estimated by using the market share of foreign shipping companies and country of origin and imported goods data. Data on export data using air transport services are requested from the domestic company engaged in foreign air transport. The income of foreign airline companies from Finland is estimated using data from the said company 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, the VR Group. Export income by road transport from abroad is based on expert opinion supplied by the Finnish Trucking Association and, since 2001, on foreign trade surveys conducted by Statistics Finland regarding services. Expenditure on road transport abroad is estimated based on income.

Insurance services

Imports and exports of insurance services are to be found in surveys of insurance corporations operating in Finland. Starting in 2000, the conducting of the survey was transferred from Statistics Finland to the Insurance Supervision Authority (VTV). 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 62 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 outlays flows, gross, to the rest of the world, is considered to be export of services. In respect of ancillary insurance services, the volume of export 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, is

considered to be import 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 import of direct business as described above to calculate exports.

Other services

Imports and exports of services also include royalties and licence fees, which earlier belonged to investment 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 expanded. 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 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 in a specific way regarding the preliminary data and in a specific way regarding the final data in the national accounts. These balancing procedures are the same for each data set from year to year.

6.1.1 Stage prior to balancing

Balancing is preceded by the calculations of sector investigators in empirical areas belonging to each. In these calculations, source material data is 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 empirical 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 synopsis staff and one or more sector investigators.

Examination of the individual calculation entities occurs according as the data nears 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 resources and expenditure

The balance of resources and expenditure, or 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 is derived given in parentheses):

- * Exports of goods and services (from foreign trade calculations)
- * Household 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)
- * 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. 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 shown in conjunction with industry data at the total level. Because in making the adjustment we do not want to alter the level of GDP, the operating surplus is adjusted by a figure with the opposite sign corresponding to the absolute value of the sum of adjustment items of wages and salaries and 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.

The value added of the economy can also be obtained as the total of the value added of separately calculated production accounts by sector. This is considered less reliable and accurate than that calculated as the total by industries and remains subordinate to it, as described above.

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 and generation-of-income accounts 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 roughly 125 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.

Where data at current prices are concerned, balancing in the definitive version is performed in a comprehensive way and no further discrepancies occur. Discrepancies at constant prices are a more serious problem because supply and demand are set at constant prices entirely independently of each other. The growth trend for 1982-1993 seems to indicate that supply prices⁷ were consistently undervalued and demand prices overvalued. Correspondingly, the volume of GDP calculated through supply is overvalued and that calculated through demand is undervalued. In order to keep these price ratios in equilibrium, a method is needed by which supply and demand flows are systematically controlled. Such a method is balancing in a supply and use table framework at constant prices to which Statistics Finland is about to transfer. This approach also operates as a more systematic balancing method than that used at present to reconcile supply and demand at constant prices.

The second factor influencing the balancing of fixed-price supply and demand is the fixed base year. In Finland, the base year changes every five years. Although this is a relatively short period, allowing the base year to recede overmuch can skew supply and demand price ratios, especially in a system akin to that of Finland, in which fixed-price supply and demand are calculated separately from each other. A base year that changes yearly would alleviate this problem and, in fact, Statistics Finland is transferring to this procedure.

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.

6.1.5. Stage preceding final compilation of accounts

The above three approach methods for estimating GDP still hold good and at this stage 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. The Finnish national accounts use a product classification that is compatible with the CPA classification, in which there are 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 182.

How production is determined on a product-by-product data. It depends greatly on the scope of the phenomenon area and source material how the necessary

⁷ In other words, undervaluation of value added by industry, taxes on products and/or import prices and/or overvaluation of subsidies on products will occur.

breakdown by product is done. In some phenomenon areas, the sector researchers do the work directly (fairly small segments) and in other cases the group in charge of compiling and balancing supply and use tables performs the work in consultation with the sector researcher responsible for the area (broader segments). 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. Some sector researchers together with the group in charge of compiling and balancing supply and use tables are involved in producing the proportionate shares used to calculate the variant items. There is usually data in the tables as to the percentage of a given product margin used at purchasers' prices and supply at basic prices.

6.1.6 Final version of resources and expenditure and how they are balanced

At this stage, resources and expenditure can be accumulated from supply and use tables for evaluation in just the same way as was described for preliminary resources and expenditure. Sector researchers can alter any items they wish, if new information is discovered in the source material evaluated. No statistical discrepancy necessarily remains, just as in the preliminary version even if price formation were balanced. Product specifications of different phenomenon areas must be adapted to potential changes before the actual balancing is started.

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

1. Identity by industry:

Output by industry = Input by industry, or

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

2. Identity by 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 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. The evaluation is performed in such a way that a person in charge compilation and balancing of supply and use tables and the sector researcher mainly responsible for the supply of the products of corresponding industry together clarify the cause of the potential discrepancy. Potential errors arising from a change of classification are adjusted at this stage, because they are usually the source of the more obvious discrepancies. They occur if some classification key by which the source data is modified for the purpose of product classification in the national accounts has not functioned correctly. 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 is considered to be more reliable at the time. The supply data is generally more reliable at the product level and, consequently, it changes less. Adjustments are 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. 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 is should be more accurate. Something can be said for the volume of change due to the fact that, for example, a total of roughly 290 products were balanced manually in 2000 out of a total of 947 products.

Balancing of valuation items

After manual balancing, the first task is to balance the valuation items. At this stage, valuation items are very close to being accurate and the final adjustment is made so that, by totalling use byproduct, 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 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 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 difference 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. The table below summarises possible measures to be taken for selected product groups:

Table 53. Possible steps in eliminating statistical discrepancy.

Measure	Supply > Use	Supply < Use
Increase supply		x
Decrease supply	x	
Increase consumption	x	
Decrease consumption		x
Increase supply and decrease consumption		x
Increase consumption and decrease supply	x	

Since the situation at the aggregate level is always according to either one of the columns but not both, there are always three options. 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, all of supply data and general government intermediate consumption data 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 consumption 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 balances.

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 1 00 euro 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 equilibrium 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 also. 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. If value added changes due to a change in an industry's intermediate consumption or supply, the difference is then carried over to the potential operating surplus. If an operating surplus is not evident, the change has already been made at an earlier stage in fact and has brought about a change in final consumption expenditure. The sector researcher then decides on the distribution of value added components (income). 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. 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. As stated above, the sector researcher must decide if the relationships between other components have changed or if the impact can be allowed to affect the operating surplus alone.

Households' consumption expenditure is converted back to the COICOP classification, and any changes are also made visible through this classification. This modification is not without drawbacks because the connection between the CPA and COICOP classifications in many categories is not without ambiguity. Consequently, new data in accordance with the COICOP classification must be modified somewhat using data in the Household Budget Survey.

Data at constant prices

The production of resource and expenditure data at constant prices is still generated in the same way in both the preliminary and final versions of the national accounts. The estimates derived from new data at constant prices are balanced only at the level of resource and expenditure components. When all individual production and generation-of-income accounts and final consumption items have been prepared at current prices, the sector researchers involved produce the data for their phenomenon area. Following this, balancing is done in co-operation with the summary group.

The problems mentioned in Section 6.1.4. remain largely unchanged following compilation of the final resources and expenditure at constant prices. The preliminary and final versions differ from each other by the fact that, in the latter, the figures at current prices for which constant prices must be set are in equilibrium. As a result, the statistical discrepancy between them cannot move in different directions, at least. Additionally, the balancing of figures at current prices hopefully will point estimates at constant prices also in the right

direction. The problem will be resolved only after a transfer to constant price supply and use tables.

6.1.7 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 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 (so-called market limits).⁸ 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 comes 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).
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 is retained and is broken down in the paying sector by separate calculation (direct taxes).

Reconciliation of balance of resources and expenditure with sector accounts

The production and generation-of-income accounts of non-financial corporations and households are first calculated independently from the data sources of individual sectors. The production and generation-of-income accounts of general government, financial and insurance corporations and non-profit institutions serving households are the same as in calculations for industries (in the first preliminary calculation at the sector level only). The total of production and generation-of-income accounts by sectors so obtained differs from that of the production and generation-of-income accounts calculated by

⁸ Integration of product balance sheets with annual accounting requires uniform, comprehensive consistency of the supply and demand of goods and services. At present, only certain products are monitored in this way, the balancing of construction investment being an example.

industry. Likewise, the value added and other components calculated through sector accounts also differ from those calculated through industries.

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

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

As an exception to this, the data by sector for operating surplus and investments may entail adjustment of the balance of resources data. This is especially so of the first version, i.e. compiling the first preliminary annual version.

Normally, discussion takes place between sectors as to how feasible it is to change the data of any particular sector with respect to operating surplus, consumption of fixed capital and investments. Generally, the discussion occurs between the non-financial corporations and household sectors and sometimes, especially in the first preliminary annual version, other sectors may enter the question.

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. 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-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 junctures (?). 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.

When calculating financial accounts, real side net lending by sector is recorded and the difference between it and the financial side's own calculations is shown as a statistical discrepancy by sector and in the domestic sectors total. It is thus the second statistical discrepancy to be shown in the system. A statistical discrepancy of the same magnitude, but with the opposite sign, is shown by the rest-of-the-world financial account.

6.2. Other approaches used to validate GDP

The items "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

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 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 of the GDP figures calculated using the production approach is published. The statistical difference 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 are 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 difference in compensation of employees in data for the income approach by industry is presented as an adjustment item and adjusting it with the opposite sign is effected in the operating surplus, but the total value added is not altered. Thus, calculation by the income approach only serves to correct the relationship between compensation of employees and the operating surplus.

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.

Kuvio 1. Vähittäiskaupan liikevaihto tuotteittain 1996, esimerkki

	52411 Retail sale of fabrics	52412 Retail sale of yarns and needlewo rk supplies	52413 Retail sale of househol d furnish ings of textile materials	52421 Retail sale of women's clothing in specializ ed stores	52422 Retail sale of men's clothing in specializ ed stores	52423 Retail sale of furs and leather clothing	52424 Retail sale of children' s clothing	52425 Retail sale of hats and caps	52429 Retail sale of clothing in non- specializ ed stores	52431 Retail sale of footwear	Recorded sales of retail trade, excl. taxes, total
Turnover (mill.FIM)	497,448	126,723	137,171	646,109	132,031	108,264	150,607	26,249	4076,814	920,903	143814,57
Distribution by product (%):											
C03 CLOTHING AND FOOTWEAR											
C031 Clothing											
C0311 Fabrics											
C03110SD Fabrics											
C0312 Garments											
C03121SD Outdoor clothing											
C03122SD Underwear											
C0313 Accessories and articles of clothing											
C03131SD Yarn, etc.											
C03132SD Hats, ties, scarves, gloves, etc.											
C0314 Garment repair and hire											
C03140S Garment repair and hire											
C032 Footwear											
C0321 Footwear and footwear supplies											
C03210SD Footwear and footwear supplies											
C0322 Footwear repair and hire											
C03220S Footwear repair and hire											
Distribution by product (mill.FIM):											
C03 CLOTHING AND FOOTWEAR											
C031 Clothing											
C0311 Fabrics											
C03110SD Fabrics											
C0312 Garments											
C03121SD Outdoor clothing											
C03122SD Underwear											
C0313 Accessories and articles of clothing											
C03131SD Yarn, etc.											
C03132SD Hats, ties, scarves, gloves, etc.											
C0314 Garment repair and hire											
C03140S Garment repair and hire											
C032 Footwear											
C0321 Footwear and footwear supplies											
C03210SD Footwear and footwear supplies											
C0322 Footwear repair and hire											
C03220S Footwear repair and hire											

Figure 1. Turnover of retail trade by product 1996, Example

In the following table households' final consumption expenditure from the Household Budget Survey is compared to consumption figures in the 1998 national accounts.

Comparison: Household Budget Survey and national accounts final consumption expenditure estimates by main group in 1998

Heading	Year 1998								
	1	2	3	4	5	6	7	8	9
	Consumption expenditure per household	Multiplied by number of households in Finland	Consumption expenditure of all households together (uncorrected)	Consumption expenditure by falling outside the HBS (persons living in institutions)	Population adjusted consumption expenditure	Adjustment: concepts, bias, etc	Adjustment: consumption expenditure of non-resident household in Finland	Consumption corrected at SKT 95 level	Comparison of SKT 95 expenditure of households
	FIM	million units	FIM million	FIM million	FIM million	FIM million	FIM million	FIM million	FIM million
TOTAL C01-C12	12 1875		28 7015	1 857	288 873	35 923	8 710	333 505	333 507
C01 FOOD AND	18 432	2 335	4 3407	23	43 431	-825	1 615	44 220	44 221

NON-ALCOHOLIC BEVERAGES								
C02 ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS	3 741	8 810	106	8 916	9 574	248	18 737	18 737
C03 CLOTHING AND FOOTWEAR	5 834	13 738	63	13 801	18	1 470	15 290	15 289
C04 HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS	35 880	84 497	0	84 497	453	0	84 950	84 951
C05 FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE	5 869	13 822	12	13 834	1 368	0	15 201	15 200
C06 HEALTH	4 730	11 139	71	11 210	131	35	11 376	11 375
C07 TRANSPORT	17 149	40 386	32	40 418	4 077	1 206	45 701	45 700
C08 TELECOMS	3 558	8 379	69	8 448	51	0	8 498	8 499
C09 RECREATION AND CULTURE	13 102	30 855	137	30 992	5 567	817	37 376	37 379
C10 EDUCATION	230	542	0	542	1 376	0	1 917	1 917
C11 RESTAURANTS AND HOTELS	5 214	12 279	308	12 587	7 630	3 319	23 536	23 536
C12 MISC. GOODS AND SERVICES	8 136	19 160	1 036	20 197	6 505	0	26 702	26 703

In the ideal case, it should be possible to make a real comparison of final consumption expenditure estimates derived from various data each year. This is not feasible, however, because, according to currently available information, the Household Budget Survey is conducted only every third year instead of annually as was announced earlier.

1. Starting point

The main data source used to calculate the final consumption expenditure of households in the national accounts (SKT 95) is data by product (FIM/year/household) from Statistics Finland's Household Budget Survey (household survey). Data are obtained in computerised form and are processed using a spreadsheet programme.

The most recent Household Budget Surveys conducted applied to 1994, 1995, 1996 and 1998. The next Household Budget Survey will apply to 2001 after which, according to currently available information, it will be consulted every three years.

2. Preliminary revision of data for accounting purposes

Final consumption expenditure data by headings in the Household Budget Survey are 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 headings.

At this stage, a link to the corresponding consumption heading in the national accounts is added to each Household Budget Survey heading. If headings are divided among several accounting headings, they are given weightings in accordance with their distribution. In the case of a single heading code, the weighting = 1. Because the product breakdown in the Household Budget Survey is considerably more detailed than in the national accounts, most instances conform to the latter case.

Figure A. Preliminary revision of data. Example.

FDP95- Consumer heading	Weight. Consumer heading	FDP95- Consumer heading	Weight. Consumer heading	Head. code	Heading in words	Year 1995		
						1 Consumpt. by h'hold	2 Coeff. househ. in Finland	3 Final cons. expenditure total (uncorrected)
						FIM	In mill.	FIM mill.
C03132S	1,00			20303	HATS, OTHER HEADGEAR	80	2,2913	183
~				204	FABRICS AND YARNS	246	2,2913	564
C03110S	1,00			20400	FABRICS	150	2,2913	344
C03131S	1,00			20401	WOOL AND COTTON YARNS, ETC.	46	2,2913	105
C03131S	1,00			20402	SEWING THREAD, PATTERNS, BIAS BINDING, BUTTONS, HOOKS, ZIPS	27	2,2913	62
~				205	GARMENT REPAIR	27	2,2913	62
C03140S	1,00			20500	GARMENT REPAIR & HIRE	27	2,2913	62
				21	FOOTWEAR & FOOTWEAR REPAIR	971	2,2913	2225
				210	FOOTWEAR	930	2,2913	2131
C03210S	1,00			21000	WINTER BOOTS	235	2,2913	538
C03210S	1,00			21001	WALKING SHOES, DRESS SHOES	443	2,2913	1015
C03210S	1,00			21002	RUBBER AND PLASTIC BOOTS	32	2,2913	73
C03210S	1,00			21003	RUNNING SHOES	111	2,2913	254
C03210S	0,20	C09320S	0,82	21004	SPORTS SHOES	71	2,2913	163
C03210S	1,00	~		21005	SLIPPERS AND OTHER FOOTWEAR	38	2,2913	87
~				211	FOOTWEAR REPAIR & ACCESSORIES	40	2,2913	92
C03220S	1,00			21100	FOOTWEAR REPAIR & ACCESSORIES	40	2,2913	92

3. Data combined with the national accounts nomenclature

By linkage in the above way, data to be found in the Household Budget Survey are converted to (uncorrected) final consumption expenditure in accordance with the national accounts nomenclature.

Figure B. Household Budget Survey data combined with the national accounts nomenclature. Example

<i>Heading in words</i>	<i>Year 1995</i>		
	<i>1</i>	<i>2</i>	<i>3</i>
	<i>Final cons'n expend. by household</i>	<i>Coeff.: h'holds in Finland</i>	<i>Household final cons'n expen. total (uncorrected)</i>
	<i>FIM</i>	<i>in mill.</i>	<i>FIM mill.</i>
C03 CLOTHING AND FOOTWEAR	4997		11451
C031 Clothing	4097		9387
C0311 Fabrics	150		344
C03110SD Fabrics	150	2,2913	344
C0312 Garments	3585		8213
C03121SD Outerwear	2965	2,2913	6794
C03122SD Underwear	620	2,2913	1419
C0313 Accessories and articles of clothing	287		658
C03131SD Yarn, etc.	96	2,2913	220
C03132SD Hats, ties, scarves, gloves, etc.	191	2,2913	438
C0314 Garment repair and hire	75		172
C03140S Garment repair and hire	75	2,2913	172
C032 Footwear	901		2064
FC0321 Footwear and footwear supplies	861		1972
C03210SD Footwear and footwear supplies	861	2,2913	1972
C0322 Footwear repair and hire	40		92
C03220S Footwear repair and hire	40	2,2913	92

4. Adjustment: Population not covered by the Household Budget Survey:

Some corrections are needed to convert the consumption expenditure described above 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 population.

In order to make the adjustment, 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 population. On the basis of data from the Ministry of Social Affairs and Health and the Ministry of Justice, the distribution of this difference among residents in various types of institution is investigated. Estimates are made of the economic situation and the consumer spending potential of residents in each type of institution in relation to the level and structure of final consumption expenditure. From this is derived an estimate of the consumption by product of institutionalised persons. The figures are added to uncorrected final consumption expenditure data, giving the so-called population-adjusted final consumption expenditure. The figure does not include the final consumption expenditure of non-resident households in Finland.

Figure C. Adjustment: population not included in the Household Budget Survey. Example.

Heading in words	Year 1995		
	3	4	5
	Households' final cons'n expend. total (unadjusted) FIM mill.	Final cons. expend. of persons not included in survey (Persons in institutions) FIM mill.	Final cons'n expenditure FIM mill.
C03 CLOTHING AND FOOTWEAR	1145	33	1148
C031 Clothing	9387	22	9409
C0311 Fabrics	344	0	344
C03110SD Fabrics	344	0	344
C0312 Garments	8213	16	8229
C03121SD Outerwear	6794	11	6805
C03122SD Underwear	1419	4	1424
C0313 Accessories and articles of clothing	658	3	661
C03131SD Yarns, etc.	220	0	220
C03132SD Hats, ties, scarves, gloves, etc.	438	3	441
C0314 Garment repair and hire	172	4	175
C03140S Garment repair and hire	172	4	175
C032 Footwear	2064	11	2074
C0321 Footwear and footwear supplies	1972	7	1979
C03210SD Footwear and footwear supplies	1972	7	1979
C0322 Footwear repair and hire	92	4	95
C03220S Footwear repair and hire	92	4	95

5. 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 the Household Budget Survey, a bias generally tends to lower final consumption expenditure. It is not usually possible to counteract the effect of this bias by increasing the sample size. There can be many reasons for bias, for example prevailing attitudes (alcohol and tobacco), the selection of respondents and incomplete bookkeeping during the survey period. In determining the size of the correction 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 identify and adjust any items deviating from the reality.

The effect of bias, random variation and other corrections described above is shown and added to final consumption expenditure at this juncture. When there is reason to adjust bias, random variation or other factors, it is given in the form of a comment in the accounting cell.

Figure D. Adjustment: Bias, random variation, possible differences in concepts and definitions.

1995				
	3	4	5	6
	Households' cons. exp. total (unadj.)	Cons.exp. not in h'hold survey (inst. residents)	Pop.-adjusted cons. exp.	Adjustment: concepts, definitions, bias etc
Nimikete	FIMm	FIMm	FIMm	FIMm
C03 VAATETUS JA	1145	33	1148	119
C031	938	22	940	117
C0311	34	0	34	15 *)
C03110SD	34	0	34	15 *)
C0312	821	16	822	90
C03121SD	679	11	680	54 *)
C03122SD	141	4	142	35 *)
C0313 Asusteet ja	65	3	66	99
C03131SD	22	0	22	99*)
C03132SD Hatut, solmiot, liinat,	43	3	44	
C0314 Vaatteiden korjaus ja	17	4	17	18
C03140S Vaatteiden korjaus	17	4	17	18*)
C032	206	11	207	20
C0321 Jalkineet ja	197	7	197	20
C03210SD Jalkineet ja	197	7	197	20*)
C0322 Jalkineiden korjaus ja	92	4	95	0
C03220S Jalkineiden korjaus	92	4	95	

*) Bias effect is corrected

6. Adjustment: Consumption expenditure of non-resident households in Finland

Because final consumption expenditure classified by use in compliance with the national accounts must include the expenditure of non-resident households 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 Bank of Finland statistics. In order to break down that value into various consumption expenditure headings, use is made of analyses in tourism surveys of how money is spent for various purposes by non-residents visiting Finland. When the expenditure thus calculated is added to final consumption expenditure according by heading, an adjusted estimate of final consumption expenditure is obtained derived from Household Budget Survey data in accordance with national accounting concepts.

Figure E. Adjustment: Non-resident households' final consumption expenditure Finland. Example.

Nimike teks	1995					
	3 Households' cons. exp. total (unadjusted)	4 Cons.exp. not in h'hold survey (inst. residents)	5 Population adjusted cons. exp.	6 Adjust.: concepts, definitions bias etc..	7 Adjust.: non-res. h'holds' cons. exp. in Finland	8 SKT95 adjusted cons. exp. as calc. from cons. survey
	FIM m	FIM m	FIM m	FIM m	FIM m	FIM m
C03 VAATETUS JA	1145	33	1148	1191	942	1361
C031	9387	22	9409	1172	904	1148
C0311	344	0	344	155	0	498
C03110SD	344	0	344	155		498
C0312	8213	16	8229	900	859	998
C03121SD	6794	11	6805	544	686	803
C03122SD	1419	4	1424	356	173	195
C0313 Asusteet ja	658	3	661	99	45	805
C03131SD Lanka	220	0	220	99		319
C03132SD Hatut, solmiot, liinat,	438	3	441		45	486
C0314 Vaatteiden korjaus ja	172	4	175	18	0	193
C03140S Vaatteiden korjaus ja	172	4	175	18		193
C032	2064	11	2074	20	38	213
C0321 Jalkineet ja	1972	7	1979	20	38	203
C03210SD Jalkineet ja	1972	7	1979	20	38	203
C0322 Jalkineiden korjaus ja	92	4	95	0	0	95
C03220S Jalkineiden korjaus ja	92	4	95			95

7. Comparison: Estimates of final consumption expenditure derived from Household Budget Surveys and other sources

When final consumption expenditure estimates derived from Household Budget Surveys have been obtained, a comparison must be made between various estimates systematically derived from other sources in order to select an approved final consumption expenditure estimate. The final consumption figure selected as the best is shown in the last column.

If the estimate chosen differs from the figures derived from the Household Budget Survey, comments are made in the cells about the data source and the basis for selecting it.

Figure F. Comparison: Final consumption expenditure estimates derived from Household Budget Surveys and other sources. Example.

Heading in words	1995	9
	8 SKT95 adjusted cons. exp. as calc. from cons. survey FIM m	Comparison SKT95 Households' cons. exp. FIM m
C03 CLOTHING & FOOTWEAR	1361	1360
C031	1148	1148
C0311	498	498
C03110SD	498	498
C0312	998	998
C03121SD	803	803
C03122SD	195	195
C0313 Asusteet ja	805	805
C03131SD Lanka	319	319
C03132SD Hatut, solmiot, liinat,	486	486
C0314 Vaatteiden korjaus ja	193	193
C03140S Vaatteiden korjaus ja	193	193
C032	213	212
C0321 Jalkineet ja	203	203
C03210SD Jalkineet ja	203	203
C0322 Jalkineiden korjaus ja	95	87
C03220S Jalkineiden korjaus ja	95	87*)

*) Final consumption expenditure estimate used is derived from business/estab. reg.

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 obtained also for own-account construction (e.g. individual houses, summer cottages, agricultural buildings).

The value of renovation is based on a basic study from 1990. A new corresponding survey is now in preparation. Other sources are the volume index of renovation work and data on household's final consumption expenditure on renovation.

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*

The following will explain clarifications regarding calculations of data in the national accounts published in 1999. The methods have been continually in use since then. The statistical base of the Finnish national accounts has broadened during the last decade. There are more data about enterprises in the Structural Business Statistics than in the earlier business statistics, and exhaustiveness has especially improved by means of the fusing of the business tax register (EVR) and the surveys of enterprises' financial statements. This and the improvement of other basic statistics, such as the reform of the business register (quality improvement since 1996) form a sound basis for the GDP figures. The report *Epävirallinen talous ja Suomen kansantalouden tilinpito* ("The unofficial economy and the Finnish national accounts") has given guidelines and direction to the work of analysing exhaustiveness. Employment comparisons and studies of tax audits have also been carried out.

The calculation method deriving from production is the most important in the national accounts. Calculations are performed by branch of activity. The key source data are total data (business register, Structural Business Statistics) and are exhaustive in relation to registered economic units. Even though the main

sources are total data, there may be differences between sources because of errors and other causes. When calculating figures by branch of activity, the sources are compared with one another and possibly with other basic data. The following table shows a comparison between the business register, Structural Business Statistics and the national accounts.

Table 54: Comparison of business register (BR), Structural Business Statistics (SBS) and the national accounts (SKT).

1996	Nace (SBS)		FNA (ESA95)				
	Rev. 1						
	BR	SBS	Market output				
Industry	Turnover	Turnover	SBS-BR	Output	FNA- BR	FNA- SBS	NB
	r	r					
C	4 517	4458	-59	4497	-20	39	
D	408 194	409 813	1 619	401 487	-6707	-8 326	trading, approximately FIM 12 000 million
E	35 895	42 122	6 227	36 209	314	-5 913	Merchandise FIM 10 000 million
F	54 832	54 374	-458	60 900	6 068	6526	own-account production and the like.
H	21 119	20 409	-710	21 258	139	849	
I	81 329	83 522	2 193	75 378	-5 951	-8 144	Travel agencies gross/net difference
K, excl. 7021	54 558	58 147	3 589	71 723	17 165	13 576	excl. 7021: Dwelling
of which 70 excl. 7021	10 272	11 625	1 353	25 977	15 705	14 352	Excl.. other real estate services.
M	1 076	1 201	125	1 402	326	201	
N	5 334	5 322	-12	5 580	246	258	
O	18 891	18 700	-191	17 198	-1 693	-1 502	Games and betting monopolies: approx. FIM 3 300 million
TOTAL C-O	685 745	698 068	12 323	695 632	9 887	-2 436	
Total excl. 70	675 473	686 443	10 970	669 655	-5 818	-16 788	

Turnover/Output of Classes G and J cannot be compared

NACE Class K Dwelling services are not included in national accounts figures (FNA) in this comparison.

As BR and SBS cover only part of Nace from A and B, no comparison is shown here.

The following may, however, be left out of the main data sources:

- random parts of the data on registered units (non-response or impossible to estimate by usual methods)
- temporary (small) units and units left unregistered in order to avoid tax.

These groups are the subject of scrutiny when assessing the scale of hidden economy factors in the national accounts. Below are described the methods and kind of work employed in making estimates.

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 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 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. Main results of the ESA 95 Reform

The following table consists of changes made in production data by industry in Finland's ESA 95 reform in 1999.

Table 55. Differences in ESA 95 figures in 1999 compared to the results of Finland's national accounts earlier in FIM mill.

FIM mill.	P1	P2K	B1GPH	%
	Output	Intermed consum.	Value added	of value added
0 Industries, Total	-5606	-14468	8862	1.8
A Agriculture, hunting and forestry	3081	2190	891	3.9
C Mining and quarrying	573	733	-160	-8.9
D Manufacturing	11153	12366	-1213	-1.0
E Electricity, gas and water supply	-11280	-11191	-89	-0.7
F Construction	-4895	56	-4951	-21.2
G Wholesale and retail trade	6741	1899	4842	9.7
H Hotels and restaurants	-442	-50	-392	-5.1
I Transport, storage and communication	9363	4534	4829	10.3
J Financial intermediation and insurance	742	-290	1032	5.5
K Real estate and business services	-4397	-3718	-679	-0.9
L Public administration and compulsory social	2321	508	1813	6.8

security				
M Education	-3470	-4468	998	3.7
N Health and social work	-15927	-16894	967	2.3
O Other community social and personal services	568	-143	711	3.8
P Household services	263		263	

The table shows that while output and intermediate consumption decreased, value added increased by almost FIM 9 000 million. At Section level, there was only one transfer between headings. Road maintenance, which was earlier in Section K, is in Section I. This entails a transfer of roughly FIM 7 000 million at the production level and roughly FIM 3 400 million for value added.

In Sections M and N are sizeable differences for output and intermediate consumption compared with value added. In these Sections (Education, Health and social work), some economic transactions which were treated as intra-local government unit purchases and sales in the earlier accounting system (as output and intermediate consumption), are now treated as current transfers.

Manufacturing

Output at basic prices 1995

In earlier accounting before the ESA 95 reform, the output of mining and quarrying and manufacturing was FIM 11 700 million lower than at present. Of this difference, FIM 5 200 million derives from the production of establishments transferred from the production of electricity to manufacturing. Correspondingly, the supply of electricity, gas and water fell by FIM 11 300 million. While FIM 5 200 million was transferred to manufacturing, the remaining FIM 5 900 million is due to a methodological change: the electricity supplied is treated as purchases and sales of products, whereas in earlier national accounting the purchases were recorded as intermediate consumption.

Without this methodological change, the total addition to Sections C, D and E is FIM 6 300 million. Revenue from patents and licences in 1995 amounted to FIM 300 million. It can be presumed that FIM 5 000-5 500 million of the FIM 6 000 million remaining derives from more exhaustive methods and changes than earlier. The latter part derives from the correction of errors and new methods. The figures are more exhaustive than earlier for the following reasons, among others:

1. The production boundary between manufacturing and trade and administration units was reviewed and certain operations were transferred to manufacturing.
2. More data on enterprises based on the use of Structural Business Statistics (and the Business Register) were included in manufacturing. This data only contains basic material at enterprise level, not establishment level.
1. The parallel use of different sources of basic data has led to the inclusion in manufacturing of many units that were earlier omitted.

From an exhaustiveness standpoint, the third point above is critical. Improvements were achieved especially in manufacturing timber and timber products, in publishing and printing, and in manufacturing plastic and metal products.

The changes in intermediate consumption mostly reflect corresponding changes in output.

Construction

The value of the hidden economy was estimated in 1995 to be FIM 2 424 million, not counting civil engineering. At the same time, a change of level was made for construction, as the old level was too exhaustive. Corrections rely on better source data (revised construction statistics) and other comparisons of basic data (business statistics).

Working for hidden income can be thought to occur mainly in the construction of dwellings (single-family houses, summer cottages, etc.) and agricultural buildings. In big construction projects, there may be subcontractors who leave earnings related social contributions unpaid, for example. Renovation work can be done without disclosing any payments so that taxes etc. are not paid.

In Finland's production-based calculation of GDP in building construction, these items are recorded in output thanks to an aggregate calculation method. Construction output is investigated from data on compulsory building permits and municipal inspection data about construction stages. Figures are based on contract prices and, by modelling labour and raw material inputs, sound estimates of the income items can be obtained. Calculations of own-account construction are based on the same method. Renovation work is obtained by interpolation from exhaustive analyses performed in 1990. A new study of renovation is in preparation.

It can be concluded that the hidden economy is exhaustively described from the output approach. If using the income approach, appropriate adjustments for the hidden economy must be made to the source data. Detailed estimates of the value of the hidden economy are contained in the production of the institutional sectors. In 1995, the hidden output of enterprises amounted to FIM 1 658 million and the hidden income of employers and own-account builders amounted to FIM 766 million. The total value of the hidden economy amounted to FIM 2 24 million, or about 6 % of output. Correspondingly, about 9 % of earnings were unofficial. Hidden economy assessments and methods are based mainly on Pekka Lith's study "Hidden Economy in Construction in the 1990s".

Wholesale and retail trade

Adjustments for the hidden economy were made in trade in motor vehicles and in vehicle repair and retail trade. Minor corrections were made to wholesale trade. They derive mainly from additions of income missing from source materials, there were fewer changes in intermediate consumption. Corrections are based mainly on the in-depth scrutiny of the data and comparisons of different source data. Certain demarcation checks were performed between manufacturing and wholesale and retail trade.

Hotels and restaurants

The biggest exhaustiveness corrections were made in the restaurant sector and only about 15 % in the accommodation sector. Tax audits were carried out on 35 restaurants in two small coastal towns in 1997. The inspections were performed on all units in the area without any prior suspicion of tax evasion. Examination of the restaurants revealed a tax fraud and tax evasion total of FIM 15 million. This information was used to assess the hidden economy in the hotels and restaurants sector.

Transport and telecommunications (market services)

Exhaustiveness corrections were made to road transport and taxi transport, for an output increase totalling FIM 1 235 million. Intermediate consumption was estimated by means of the vehicle stock and average costs so that it includes hidden economy intermediate consumption without a separate correction. Most of the changes arise from undercoverage corrections (Output 2271, Intermediate consumption 4070) and partly from structural changes between industries.

In 1996 all the taxis, totalling about 230, were investigated in three smallish towns. All bookkeeping documents, taxi meters and receipts were examined in the inspection. Based on the results of the audit, a correction of about FIM 270 million was made in the national accounts.

Table 56: Hidden economy by industry in FIM mill.:

Industry	New	Old	Diff.	Hidden economy incl. tax audit	Changes in coverage (+, -)	Other
Constr. of buildings						
Output	42 877	45 154	-2 277	2 424	- 2 277	
Intermediate consumption	26 630	25 596	1 034		1 034	
Value added	16 283	19 558	-3 311		-3 311	
Transport, telecommunications						
Output	80 774	71 411	9 363	1 235	3 128	5 000
Intermediate consumption	33 722	29 188	4 534		346	4 188
Value added	47 052	42 223	4 829	1 235	2 782	812
Wholesale & retail trade						
Output	83 289	76 548	6 741	1 551		5 190
Intermediate consumption	33 576	31 677	1 899	727		1 172
Value added	49 713	44 871	4 842	824		4 018
Hotels & restaurants						
Output	20 318	20 760	-442	636	1 181	-2 259
Intermediate consumption	12 612	12 662	-50	447	675	-1 172
Value added	7 706	8 098	-392	189	506	-1 087

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.

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.

7.4.4. *Industries*

The classifications by industry in the national accounts (NA) and the Labour Force Survey (LFStat, or TYTI 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.

A Agriculture, hunting and forestry

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 agriculture 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.

B Fishing

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 angling is included. The number of leisure angling 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 %.

C Mining and quarrying

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 LFSTAT. The national accounts figures are from the business register.

D Manufacturing

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 17000-4000. There was a marked difference in 1995-1996 in manufacturing 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.

E Electricity, gas and water supply

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.

F Construction

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.

G Wholesale and retail trade

Employment figures and hours worked in wholesale and retail trade do not vary much between the different statistics.

H Hotels and restaurants

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.

I Transport, storage and communication

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.

J Financial intermediation and insurance

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.

K Real estate and business services

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.

L Administration

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, roughly 33 000 in 1996 and roughly 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 %.

M Education

Depending on the year, the difference in education is between 2000-6000 (1.5-5 %), the LFSTAT being higher. The percentage difference in hours worked is around 40 %.

N Health and social work

The employment figures for health and social work are roughly between 15000-7000 (roughly 6 %) higher in the LFSTAT than in the national accounts. There is a difference of roughly 10 % in hours worked.

O Other community, social and personal service activities

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.

P Household services

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.

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 %). The difference in hours worked for the period under review was roughly 5 %.

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 figures because the figures in labour force statistics are systematically higher than corresponding figures at the aggregate level in the national accounts. In addition, there are clear differences in the statistics of certain industries. Some of the employed may be omitted from the figures. This probably does not mean missed production, however. A more systematic analysis than this comparison is necessary between various statistics producing employment data so that the reasons for these differences can be established and put into better focus. For this purpose, a project for the development of labour accounts has been initiated at Statistics Finland.

Table 57: 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
E Electricity, gas and water supply	19.7	22.0	-2.3	-11.8
F Construction	132.5	129.9	2.6	2.0
G Wholesale and retail trade	262.9	262.9	0.0	0.0
H Hotels and restaurants	65.8	65.7	0.1	0.1
I Transport, storage and communication	163.7	163.6	0.1	0.0
IA Transport and storage	118	117	1.0	0.8
IB Post and telecommunications	45.7	46.6	-0.9	-2.0
J Financial intermediation and insurance	42.8	47.9	-5.1	-11.9
K Real estate, renting and business services	158.6	191.7	-33.2	-20.9
KA Real estate services	27.0	29.7	-2.7	-9.9

KB Business services	131.6	162.1	-30.5	-23.2
L Public administration and compulsory social security	165.0	108.7	56.3	34.1
M Education	140.9	145.4	-4.5	-3.2
N Health and social work	293.2	310.0	-16.8	-5.7
O Other community, social and personal service activities	96.7	116.0	-19.3	-20.0
P Household services	8.5	3.9	4.6	54.1
Q Extra-territorial organisations and bodies	0.0	0.4	-0.4	
X Industry unspecified	0.0	7.2	-7.2	
Total	2139	2169	-30.5	-1.4

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, interest, subsidies, 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, excepting services related to construction.

8.1. Compensation of employees

Only wages and salaries, and not employers' social contributions, are recorded in this item. Where social contributions are concerned, the availability of data and the estimation methods are still being investigated.

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 less than six months abroad, because tax is payable on these earnings in Finland. The figure is therefore increased by 50 % and assumed to include the wages and salaries of all persons in employment relationships of less than one year's duration. Because the tax administration's tax payment statistics do not contain any information of payments by foreign employers, and of the social security contributions received by people holding their centre of economic interest in Finland, and because no other data sources for this item are known to exist, we have not made any entries for an item of this name. If the increase of 50 % that we use in the wages and salaries total shown in the tax payment statistics is still too high, we can consider part of the increase as compensation for missing social security contributions. The above arguments can be applied to the corresponding entries for payments from Finland to the rest of the world. Besides the data in the tax payment statistics, there is data about wages and salaries earned in the rest of the world in Statistics Finland's report on income distribution in 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 6–12 months duration. According to the survey, untaxed wages and salaries earned in the rest of the

world totalled roughly over 100 million euros. When it is taken into account that the answers to such survey questions represent an evident selective downward loss, we estimate that a wages and salaries total 171.1 million euros for 6 – 12 month employment relationships in the rest of the world may be regarded as satisfactory.

Wages and salaries paid to the rest of the world

Some data on work permits is available from Ministry of Labour. The data consists of number of permits. It includes permits given abroad (non-EU, normally in Estonia or Russia). Giving permits is a task of many authorities: Ministry of Labour, Directorate of Immigration, Police and Ministry of Foreign Affairs.

Work permits granted by the Finnish missions abroad in 2002 was 11 696 for persons staying or working in Finland temporarily. Also Police authorities can give work permits foreigners staying in Finland. Problem is that we don't have exact number of those who could be temporary workers. The estimate used in NA includes given permits, foreign students working temporarily in Finland and illegal labour on some industries (like construction, some services, agriculture), total estimate is 17000 persons. Of the average duration of work there is no information available. We use estimate of 3-4 months. Average wages are a rough estimate that takes account that many foreign employees work at low paid work (especially illegal workers).

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. Storage and production levies on sugar are also counted as taxes and duties on imports. Data on these are obtained from the Ministry of Agriculture and Forestry. Taxes and duties on import 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 data. The data has 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 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.

It is not clear, unfortunately, how these taxes are entered in the EU's balance of payments. Consequently, it is impossible to investigate potential discrepancies between the accounts. At the moment the difference between Finnish national accounts and the BoP of EUI can be explained in one special case. The discrepancy in the amount of VAT in these two sources appears because of the different classification on the UK correction. Until the end of 2003 the UK correction has been included in the VAT payment of Finland and it seems that this amount has always been excluded from the VAT payment in the EU's BoP. In the Finnish national accounts treatment of UK correction has now been changed for the whole time series and it is included in the GNI payment. This change reduces the difference between the figures in these two sources.

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.

As it is said in the Finnish Gross National Income Inventory the main source of information for EU subsidies is the state bookkeeping data. All the subsidies from EU institutions are paid through the state finances and

are recorded in the state bookkeeping data. In national accounts these subsidies are recorded according to the states' final accounts i.e. the amounts and the timing of transactions are the same. The data follows state' general accounting rules and is congruent with the Commission's fund specific regulations concerning the recording of these subsidies. Depending on the different basis of recording of the specific transactions, the subsidies are recorded in cash or accrual basis in the data i.e. the timing is not the same for all the transactions. There may also be differences between the yearly amount of revenues from EU institution and the expenses paid from these funds because of the difference in timing.

The same data is used also for Finland's Balance of Payments. Data from EU Institutions BOP is not used because it differs from central government data (which we think is reliable).

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. Only subsidies financed by the Finnish Government are recorded as paid by the State. 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.

Subsidies on products, according to the financial statements of central government include part of the national support for agriculture and horticulture (Subitem 30.12.41) and European Union income support (30.12.43). 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: EU participation in structural and regional programmes and Community initiatives, EU participation in labour and social policy, part of EU income support, environmental aid, the abandonment subsidy, the arable land afforestation subsidy, fisheries intervention activities and support of 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 also are 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.

Investigating EU income subsidies in the national accounts is a considerably more complicated task than investigating taxes. There is no unambiguous list of income subsidies from which the composition of economic activity could be clarified. This is due to the method of compiling EU income subsidies, which we have tried to simplify in the following:

First, all money flows received from the EU are traced. The sources are the Financial Statement and Report data and their classification into commercial

accounts. There is a separate commercial account for data concerning deposit income paid by the EU. Every income flow from the EU can also be traced to separate budget revenue accounts (to Budget items).

After income received from the EU has been determined, the ends to which the fund are put by central government are investigated. Use is made of data in text sections in the Budget, the Final Statement and Report, the budget accounts and commercial accounts and statements by experts in the agencies making entries. This stage of the process could be described as detective work.

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. (Income and capital transfers to municipalities, enterprises, social security funds, households, and non-profit institutions are traced using corresponding methods. Additionally, income and capital transfers are shown for some of these sectors, which are to be found in sources other than final central government accounts. These cash flows reach the source materials and eventual receiving sectors directly from the EU.) From the central government's standpoint, the revenue and expenditure are curtailed from the central government sector.

The table shows a list of income subsidies from the EU in 2000. It is based on national accounting data and was compiled using the method described above.

EU income subsidies in, 2000

	€ million
Participation by EU in structural and regional development programmes and Community initiatives	13
Participation by ESF in Objective 2, 3, 4, 5b and 6 programmes and Community initiatives and pilot projects	23
EU income subsidy, EAGGF-T	389
Environmental subsidy, EAGGF-T	154
Subsidies for farm relinquishment and afforestation of arable land, EAGGF-T	4
Fisheries intervention fund and support for fisheries	1
Intervention fund (Agricultural Intervention Fund)	124
EU participation in structural measures for the food industry and rural areas, EAGGF-O	20
LFA compensation, EAGGF-O	126
EU part-financed Rural Development Fund aid *	7
Total	861

* Added after the 2002 level evaluation

Clarifying the differences between the national accounts and EU balance of payment EU subsidies is not possible because the compilation methods for the balance of payments have remained unclear. Potential discrepancies might be found in the definition (are the subsidies, income transfers, capital transfers and other such definitions the same?) of entry-based economic activities, methods and source materials (somewhere between the cash-basis principle and the accrual principle in accounting because such kinds of entries are entered on the cash-basis principle as a rule. Where agricultural subsidies are concerned, for example, it can happen that a financial statement is anticipated, even if the

payment has not been genuinely transacted). Additionally, significant timing adjustments to the agricultural subsidies in question were unnecessary if the data was compared to agricultural income statistics based on the accrual principle) or possibly somewhere else altogether. (It is unlikely that Finland's Financial Statement and Report will be gone through exhaustively for the EU's balance of payments. Instead, a more approximate way will be used).

8.4 Interest

This section also describes the calculation of dividends.

The data sources for property income and expenditure consisted, until 1998, of the foreign payments 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 were used. Beginning in 1999, property income and expenditures are based on the latter two data sources.

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 15th working day of the following month.

8.5 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.

8.6 *Reinvested earnings on direct foreign investment*

The returns on direct equity investments are requested in conjunction with the annual direct investment survey of businesses, which is conducted by the Bank of Finland's statistics department.

The target population of the survey of enterprises making direct investments in the rest of the world numbered about 700 in 2000. The population of foreign-owned businesses in Finland in 2000 was about 1 200. From this population samples of about 200 businesses (from Finland to the rest of the world) and about 700 businesses (from the rest of the world to Finland) are taken for the annual surveys. The population of enterprises making direct investments is made up of the enterprises which made direct investments in previous years plus data culled from daily monitoring of domestic newspapers and news media. Regarding major business operations, there are contacts with the businesses which are the subject of such arrangements. The Bank of Finland keeps data on enterprises which have invested in the rest of the world and conveys them to Statistics Finland. Data on foreign-owned enterprises in Finland and on Finnish enterprises with subsidiaries in the rest of the world are to be found in Statistics Finland's business register. In addition, wide-ranging framework surveys are carried out every 3-5 years to refine the survey framework. The most recent revision of the framework was in 1999.

8.7 *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 did not appear earlier. Property income of insurance policy holders is calculated in Finland for rest of the world accounts only in respect of life insurance because the volume of direct business underwritten in Finland by rest of the world companies is small; such premiums written amounted to 23 million euros in 2000 and 34 million euros in 2001.

8.8 *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.

Chapter 9 Transition from GDP to GNP (ESA 79 definition)

When transferring from GDP in compliance with ESA 95 to gross national income (GNI) in compliance with ESA 79, differences of Euratom: Commission Decision No 7/178/EC of 10 February 1997 on the definition of a methodology for the transition between the European System of National and Regional Accounts in the Community (ESA 95) and the European System of Integrated Economic Accounts (ESA second edition) must be appraised and recorded. The following will explain the measures taken in the national accounts to quantify the said differences. The numbering in Chapter 7 conforms to the numbering of items used in GNI reports. In addition, an adjustment made in the ESA 95 GNP before the differences were taken into account is shown. It

applies to the handling of claims for recovery from municipalities of value-added tax rebates during 1994-1996.

1. Residence criteria

This group of subjects includes students, installation of equipment abroad and construction projects abroad. According to ESA95, students are always the population of the country of origin. In ESA79, the one-year rule is followed. In practice, this has a minimal impact on GNP, and none whatsoever on GDP.

In ESA95, installation of equipment abroad is to be classified as output by the country of origin, not by the country of transaction. Installation projects lasting more than one year are attributed to the country of transaction in ESA79, projects lasting less than one year to the country of origin. In practice, it can be assumed that installation projects always last less than a year, so there is no difference.

In ESA95, construction projects are always recorded under the country of transaction, but in ESA79 the one-year rule is applied. In practice, it can be assumed that construction projects always last more than one year, so there is no difference.

2. FISIM

Not reported.

3. Insurance

The definition of output varies: ESA79 property income distributed to insurance policy holders, ESA95 all net earnings from investment activity (income obtained from the investment of insurance technical reserves, including net rental income from investment activity). The necessary data are to be found in the insurance statistics compiled by the Ministry of Social Affairs and Health, which provide data on output and intermediate consumption. The difference in output between ESA95 and ESA79 is divided between intermediate consumption and final use (in practice the consumption expenditure of households).

Table 58: Adjustment item for insurance ESA95/79

Insurance 2000 ESA 79

<i>Mill. €</i>	Life-companies	Pension funds & foundations	Non-life companies	Non-life Insurance Assoc.	Finnish Motor Insurers' Centre	Total ESA 79	Total ESA 95	Diff. ESA-95)
Premiums written	3 716	66	2 394	121				
Change in provision for unearned premiums	-3 077	121	-43	-3				
Claims paid	-912	-439	-1 929	-70				
Claims handling expenses	11		162					

Change in the provision for claims	-271	-26	-133	-2				
Investment income, excl. revaluation & capital gains/losses 1)	475	201	284	13				
Investment charges (25)	-13	-5	-8	-8				
Investment management charges	40		80					
Own funds share of net investment income	-26		-151					
Service charge (market output) total	-57	-81	654	52	7	575	1 220	646
Income (ESA 95)	296		854					
Difference (ESA 79-95)	-353		-200					

1) Only interest income is counted in investment income while the ESA 95 calculations also include dividend, rent and other income.

Likewise, only interest charges are counted in investment charges.

4. Direct investment earnings

According to ESA95, reinvested earnings from direct foreign investment are recorded as property income. In ESA79, they are not classified as property income. In the Finnish national accounts, reinvested earnings from direct investment were already calculated in the earlier version prior to ESA95. The item is based on data collected from enterprises by the Bank of Finland.

5. Interest income

The recording basis for interest was changed from a cash-basis principle to an accrual principle in ESA95, which also affects the capital income item, both to and from abroad. It was only possible to make an accrual adjustment to accounts data from 1997, which is when data became available. The foreign countries portion of accruals was estimated on the basis of Treasury data and balance-of-payments data.

6. Cultivated natural growth of plants

Agricultural crops are grown and harvested the same calendar year so that the ESA 95 recording basis has no impact on agricultural output at the annual level. Forestry output continues to be calculated in the new accounts on the basis of logging and other measures related to forestry, so there is no methodological change. The calculation method based on logging output is more reliable than one based on growth. A similar method is used in compiling economic accounts for agriculture and forestry (EAAF).

7. Computer software and large databases

Software and large databases are recorded in ESA95 as intangible gross fixed capital formation. According to ESA79, separately purchased software is classified as intermediate consumption. In the Finnish national accounts, data have been estimated by establishing the domestic production, import and export of software. Conversion from ESA95 to ESA79 reduces gross fixed capital formation, gross value added and gross operating surplus and increases intermediate consumption and public consumption expenditure. For non-market

activity, account has been taken of the change (increase) in the consumption of fixed capital as a result of investments, which reduces value added, output and public consumption expenditure.

8. Military equipment and vehicles, other than weapons

Of little significance, would only be perceptible in terms of consumption. Since 1994, this distinction has no longer been made. In the Finnish national accounts, this change has not in practice produced any differences in the figures between the old and new accounting systems. Prior to 1995, ESA95 investments under FIM 200 million per year. Mostly buildings with a write-off period of over 50 years, so GDP impact of estimated consumption very small.

9. Work-in-progress on services

In accordance with ESA95, long-term service projects (e.g. design services) that extend over two accounting periods (years) are recorded as work-in-progress until output is finished. Under ESA79, these types of project were only recorded as output when they had been finished.

In Finnish commercial bookkeeping practice, business statistics and national accounts, it is not possible to separate out completions of projects, and they are recorded as output according to the work completed, etc. Output is calculated in the old and new accounting systems in accordance with ESA 95. On the basis of the available data sources, it is not possible to entirely separate the item in question. By means of data in structural business statistics about the financial statements of enterprises, the data on works in progress in the service industries sector can be estimated (includes goods to some extent). The data sources do not always reflect the potential share of profit in projects. By applying the structural business statistics data to Business Register levels, we reach a change of inventories total of -24 million euros in 2001, which is 0.2 % of the turnover of the corresponding industries.

The calculation will be made on a yearly basis and will be attached to levels in the national accounts.

10. Mineral exploration expenditures

Mineral exploration expenditure is calculated with the help of turnover data for companies conducting exploration as shown in the business register, and using the 1987 special report drawn up by the Finnish Association of Consulting Firms (SKL). These are used to estimate the total amount of "Measuring, mapping and geotechnical services". Services other than those commissioned by the extractive industry are then deducted from this figure, leaving the portion accounted for by mineral exploration.

11. Consumption of fixed capital on roads, bridges, etc.

These consumption data are calculated using Finland's capital stock model (the PIM method). The service life of roads is estimated to be 52 years. Data are based on research by the Road Administration. Basic data on gross fixed capital formation for the model are to be found in central government and local authority records.

12. Government licences and fees

ESA95 changes the treatment of payments for licences from general government and similar charges in that, to a greater extent than before, the new accounting recommendation classifies these payments, which were formerly treated as taxes, as payments for services from general government (i.e. producers' intermediate consumption and final consumption expenditure of households). In Finland, an Act on Charges for Public Services came into force in the early 1990s. This shifted pricing for this type of charge towards the covering of costs, i.e. towards service payments for public services. Since these payments cannot be separated from other charges for services, payments for licenses and various types of inspection are basically treated in Finnish national accounts as service payments. This was also the case in ESA79.

13. Valuation of output for own final use and output from voluntary activity

For units other than households, output for own final use means the production of capital goods. In practice, most of these are buildings, the calculation method for which in Finland already allowed for the significance of operating surplus in the former accounting procedure. In this respect there is no difference between the new and old accounting methods. Output of consumer goods on the part of households is estimated using the same basic price in both systems.

Capital goods (= buildings) constructed using voluntary labour were already valued in aggregate data on construction in Finland and in the statistical processing of those data in the same way as other construction, and they cannot be separated out.

14. Valuation threshold for capital goods

Finnish source data are based very largely on aggregate data, which are collected in accordance with accounting data. Companies' accounting data are also based on special studies. The Finnish Accounting Standards Board issues guidelines on interpreting the law and has defined a maximum value for durable good to be recorded as intermediate consumption. This value has increased over time, but is not the same as the ESA-based ECU values. When a maximum amount is required in markka, actual average values can only be estimated. For this reason, it is not possible at this point to produce a figure that would allow intermediate consumption to be increased at the expense of gross fixed capital formation.

15. Market – Non-market criteria

No impact. Units which would be classified as non-market producers according to ESA 95, but market producers according to ESA 79, or *vice versa*, do not arise. It was earlier agreed to follow ESA 95 practice in the accounting section.

16. Subsidies

a) Payments for specific groups of households previously defined, which are made to market units to enable them to reduce the price of products for these households:

Prior to 1995, State subsidies included payments to market producers (State railways, bus and taxi companies) to reduce the cost of public transport. Reductions were not primarily aimed at special groups of users, but were designed to reduce fares in general. However, these subsidies contained a relatively small item (around FIM 70 million) which was paid for social reasons to household groups such as pensioners and students, and under ESA79 these payments should be recorded as social security payments.

Similar payments have not been possible since 1995 owing to changes in the payment principles. Separate subsidies to reduce fares on public transport are no longer granted. Instead, they form part of decisions about the extent of mass transit purchased by central government from producers, based on negotiations between the two parties. Purchases are entered as subsidies in the national accounts rather than government intermediate consumption.

b) Payments to market producer units to pay entirely or in part for goods and services that those units provide directly and individually to households and to which the households have a legally established right: these payments are not booked as subsidies in either ESA79 or ESA 95.

17. Entertainment, literary and artistic originals

Formerly property income, now under ESA95 output of services and investments. Original works in entertainment, art and literature are part of gross fixed capital formation in ESA 95. The estimate is based on data about the publication of given types of book, films and music and the production of various programme products. The intermediate consumption of such operations is of no significance. Therefore no reduction was made with respect to it.

18. Services associated with a licence to use entertainment, literary and artistic originals

Licences or other payments for the above-mentioned originals – in ESA79, property income, in ESA95 output and use of services. Payments from the rest of the world are recorded in Item 22 and they cannot be separated out. Domestic payments are negligible and their influence on gross national income insignificant.

19. Garages

According to ESA79, only garages incorporated into dwellings must be included in actual and imputed rents. ESA95 also includes separate garages. Impact quite small, not assessed.

20. Car registration taxes paid by households

There is no car registration tax in Finland. The charges collected are service payments in accordance with the payments decree.

21. Wages and salaries in kind

The ESA95 definition of wages and salaries in kind is broader than that of ESA79. In particular, sports and leisure facilities arranged by an employer for employees and their families are now classified as wages and salaries in kind.

In this respect, Finland's national accounts have not been changed, so there is no adjusting item.

22. Licences for the use of intangible non-produced assets

Licences for the use of patents or other rights etc. ESA79 considers these as property income, ESA95 records income received from the use of licences as output, intermediate consumption or final use. The change impacts foreign trade figures in that items earlier recorded as property income are now foreign trade of services. This has no impact on GNI (however, it does impact GDP) because the items change places in rest-of-the-world economic activities. The impact remains small between domestic economic units, no separate data being available.

23. Stamp taxes

According to ESA95, stamp taxes are taxes on products. According to the former recommendation, stamp taxes paid by manufacturers were treated as other taxes on production (other indirect taxes), and since there were no explicit instructions about stamp taxes paid by households, they were classified in ESA79 with other current transfers. In Finland (SKT 90), stamp taxes paid by households were treated as compulsory payments (i.e. direct taxes) and stamp taxes paid by manufacturers as other indirect taxes. The GDP Committee's recommendation (Eurostat/B1/CPNB/262) can be interpreted as meaning that the GNP impact of stamp taxes on wealth is the same in both ESA79 and ESA95.

In Finland, there were stamp taxes paid up to 1993 on documents, which ESA95 regards as taxes on products. As they are not connected with wealth, they are not included in the ESA79 GNP.

24 Financial leasing

Financial leasing causes a discrepancy between ESA95 and ESA79 only in terms of foreign leasing payments when netting domestic leasing transactions. The significance of this economic activity in Finland is in the acquisition of (commercial) aircraft by financial leasing. The figures are based on aircraft import data and on data obtained from Finnair Oy. Leasing payments received by Finland are not known.

25. Pension funds

No impact. Finland's employee pension and unemployment funds are classified in both ESA 79 and ESA 95 as social security funds.

26. Changes in due payment dates for taxes, salaries, social contributions and benefits

No impact. Changes influencing GDP or GNI in accordance deficit decisions on the due date do not occur. Wages and salaries and social security contributions are recorded in both current and previous accounting in accordance with ESA 95 on the accrual principle no differently from entries in accordance with ESA79. The entry method of taxes related to production was changed from a cash-basis principle to a time adjusted cash-basis principle in

accordance with ESA 95, but this cannot be regarded as a change from ESA 79 to ESA 95.

27. Minor repairs by owner-occupiers

No impact. Procedure in accordance with ESA 95 (CPNB/210)

VAT refunded to municipalities (1994)-1996

In Finland, the VAT paid by municipalities on their procurements is reimbursed for the sake of neutrality of competition. However, the reimbursements are subsequently clawed back, as the municipalities are not subject to VAT, nor are they eligible for reimbursements. Since 1997, the claw-back has been 100 %, so there has been no impact on GNP. Between 1994 and 1997, the claw-back was around 77.5 %, i.e. VAT relief of 22.5% for the municipalities. This must be treated as a current transfer under ESA79. In the ESA95 figures on state aid in Finland, the relief is treated as a tax reduction. Eurostat has interpreted the ESA79 rule as also applying to ESA95. For this reason, the reduction has now been added to Finland's GNP figure for the years 1994 to 1996 prior to the ESA95-ESA79 conversion. The increases for these years are FIM 467 million, FIM 641 million and FIM 797 million.

Swap adjustment

We have just got information from the State Treasury that the data concerning swap interest payments of central government will be available in few weeks from 2002 onwards.

As for other sectors, according the bookkeeping rules in force there is no separate data for this item. The new bookkeeping standard IAS will require the entry of swap, but it will concern only largest enterprises in Finland.

Chapter 10 Main classifications

10.1 Classifications in the production approach

10.1.1 Classification by sector

Sector classification 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 2000 code	Tilinpidon sektoriluokitus (S)	Account sector classification (S)
	S0	Sektorit yhteensä	Sectors total

S.1	S1	Koko kansantalous (kotimaiset sektorit yhteensä)	Total economy (national sectors total)
S.11	S11	Yritykset ja asuntoyhteisöt	Non-financial corporations and housing corporations
	S111	Yritykset	Non-financial corporations
S.11001			
S.11002+11003			
S.11	S112	Asuntoyhteisöt	Housing corporations
S.12	S12	Rahoitus- ja vakuutuslaitokset	Financial and insurance corporations
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	Local government
S.1314	S1314	Sosiaaliturvarahastot	Social security funds
	S13141	Työeläkelaitokset	Employee pension schemes
	S13149	Muut sosiaaliturvarahastot	Other social security funds
S.14	S14	Kotitaloudet	Households
S.141+S.142			
S.143			
S.144+145			
S.15	S15	Kotitalouksia palvelevat voittoa tavoittelemattomat yhteisöt	Non-profit institutions serving households
S.2	S2	Ulkomaat	Rest of the world
S.21			
S.211			
S.212			
S.22			
S.N	SN	Sektoreittain jakamaton	Not allocated to sectors
	SX	Sektoreiden korjauserä	Correction item of sectors

10.1.2 Classification by industry

In the output approach, Finland's national accounts are calculated on the basis of establishments by industry, not product. Consequently, 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 industry classification SIC 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.

TOIMIALALUOKITUS

CLASSIFICATION OF ECONOMIC ACTIVITIES

SIC 2002 FNA2000 Toimialaluokitus
NACE2002 code

Classification by industry

	0	Toimialat yhteensä	Industries total
A	A	Maatalous, riistatalous ja metsätalous	Agriculture, hunting and forestry
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	Kalatalous	Fishing
05	05	Kalastus, kalanviljely ja niihin liittyvät palvelut	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
C	C	Mineraalien kaivu	Mining and quarrying
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
D	D	Teollisuus	Manufacturing
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, paperituot. 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, kaksin, ydinpoltoaineen valmistus	Manufacture of refined petroleum products, coke and nuclear fuel
23	23	Öljytuotteiden, kaksin, ydinpoltoaineen 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	Sähkötekniisten tuotteiden 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
E	E	Sähkö-, kaasu- ja vesihuolto	Electricity, gas and water supply
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
F	F	Rakentaminen	Construction
45	45	Rakentaminen	Construction
	4501	Talonrakentaminen	Building of complete constructions or parts thereof
	4502	Maa- ja vesirakentaminen	Civil engineering
	4509	Rakennuspalvelutoiminta	Construction service activities
G	G	Kauppa; moottoriajoneuv. ja kotitalousesin. korjaus	Trade; repair of motor vehicles and household goods
50	50	Moottoriajoneuvojen kauppa, korjaus ja huolto; huoltamot	Sale and maintenance of motor vehicles; service stations
501,503...505	501	Moottoriajoneuvojen kauppa; huoltamot	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
H	H	Majoitus- ja ravitsemistoiminta	Hotels and restaurants
55	55	Majoitus- ja ravitsemistoiminta	Hotels and restaurants
551+552	551	Majoitustoiminta	Hotels
553...555	553	Ravitsemistoiminta	Restaurants
I	I	Kuljetus, varastointi ja tietoliikenne	Transport, storage and communication
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 metrolinien	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
J	J	Rahoitus- ja vakuutustoiminta	Financial intermediation and insurance
65	65	Rahoitustoiminta	Financial intermediation
66	66	Vakuutustoiminta	Insurance
67	67	Rahoitusta ja vakuutusta palveleva toiminta	Activities auxiliary to financial intermediation and insurance

K	K	Kiinteistö-, vuokraus- ja tutkimuspalv., liike-elämän palv.	Real estate, renting, research and business activities
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 non-residential buildings
70209	7022	Kiinteistöjen vuokraus ja hallinta	Real estate leasing and management
703	703	Kiinteistöjen välitys, isännöinti ja hoito	Real estate brokerage 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 consulting; holdings
742+743	742	Tekninen palvelu; testaus ja analysointi	Technical activities; testing and analysis
744	744	Mainospalvelu	Advertising
747	747	Sivous	Industrial cleaning
745+746+748	748	Muut palvelut liike-elämälle	Miscellaneous business activities n.e.c.
L	L	Hallinto, pakollinen sosiaalivakuutus	Administration, compulsory social security
75	75	Hallinto, pakollinen sosiaalivakuutus	Administration, compulsory social security
	751	Julkinen hallinto	General government
	752	Maanpuolustuskalusto ja varusmiehet	Defence equipment and conscripts
753	753	Pakollinen sosiaalivakuutustoiminta	Compulsory social security activities
	7531	Työeläkevakuutus	Employee pension insurance
	7539	Muu pakollinen sosiaalivakuutus	Other compulsory social security
M	M	Koulutus	Education
80	80	Koulutus	Education
N	N	Terveystenhoito- ja sosiaalipalvelut	Health and social work
85	85	Terveystenhoito- ja sosiaalipalvelut	Health and social work
851	851	Terveystenhoitopalvelut	Human health activities
852	852	Eläinlääkintäpalvelut	Veterinary activities
853	853	Sosiaalipalvelut	Social work activities
O	O	Muut yhteiskunnalliset ja henkilökohtaiset palvelut	Other community, social and personal service activities
90	90	Ympäristöhuolto	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
P	P	Kotitalouspalvelut	Household service activities
95	95	Kotitalouspalvelut	Household service activities
	X	Toimialoittain erittelemätön	Industry unspecified
	991	Välilliset rahoituspalvelut (jakamaton FISIM)	Financial intermediation services indirectly measured (undivided FISIM)

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 producer comprise market producers and non-market producers of two kinds: own final use producers and other non-market producers.

FNA code	Tuottajatyypiluokitus (T) 5)	Classification by type of producer 5)
T1	Markkinatuottajat	Market producers
T2	Omaan loppukäyttöön tuottajat	Producers for own final use
T3	Muut markkinattomat tuottajat	Other non-market producers
T0	Tuottajatyypit yhteensä	Producers by type, Total

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 sector classification 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)		Classification of individual consumption by purpose – COICOP/SKT95
SKT95-kulutusnimikkeistö		FNA95 Consumer item heading
C01	ELINTARVIKKEET JA ALKOHOLITTOMAT JUOMAT	FOOD AND NON-ALCOHOLIC BEVERAGES
C011	Elintarvikkeet	Food
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 pre-cooked 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 pre-cooked 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	01.2 Alkoholittomat juomat	Non-alcoholic beverages
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
C02	ALKOHOLIJUOMAT, TUPAKKA JA HUUMEET	ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS
C021	02.1 Alkoholijuomat	Alcoholic beverages
C0211	Väkevät alkoholijuomat	Spirits
C02110ND	Väkevät alkoholijuomat	Spirits
C0212	Viini, siideri, long drinkit	Wine, cider, long drinks
C02120ND	Viini, siideri, long drinkit	Wine, cider, long drinks
C0213	Olut	Beer
C02130ND	Olut	Beer
C022	Tupakka	Tobacco
C0220	Tupakka	Tobacco
C02200ND	Tupakka	Tobacco
C023	Huumeet	Narcotics
C0230	Huumeet	Narcotics
C02300ND	Huumeet	Narcotics
C03	VAATETUS JA JALKINEET	CLOTHING AND FOOTWEAR
C031	Vaatetus	Clothing
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	Jalkineet	Footwear
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
C04	ASUMINEN, VESI, SÄHKÖ, KAASU JA MUUT POLTTOAINEET	HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS
C041	Todelliset asumisvuokrat	Actual rents for housing
C0410	Todelliset asumisvuokrat	Actual rents for housing
C04100S	Todelliset asumisvuokrat	Actual rents for housing
C042	Laskennalliset asumisvuokrat	Imputed rents for housing
C0420	Laskennalliset asumisvuokrat	Imputed rents for housing
C04200S	Laskennalliset asumisvuokrat	Imputed rents for housing
C043	Asunnon ylläpito ja korjaus	Maintenance and repair of dwelling
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
C044	Muut asumiseen liittyvät palvelut	Other services relating to housing
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.
C045	Sähkö, kaasu ja muut polttoaineet	Electricity, gas and other fuels
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
C05	SISUSTUS, KOTITALOUSVÄLINEISTÖ JA TAVANOMAINEN KODINHOITO	FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE
C051	Huonekalut, sisusteet, matot ja muut lattiapäällysteet	Furniture, furnishings, carpets and other floor coverings
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.
C052	Kotitaloustekstiilit	Household textiles
C0521	Kotitaloustekstiilit	Household textiles
C05211SD	Tekstiilit	Textiles
C05212SD	Patjat	Mattresses
C05213S	Kotitaloustekstiilien korjaus	Repair of textiles
C053	Kodinkoneet	Household appliances
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
C054	Lasiesineet, ruokailuvälineet ja kotitalouden käyttöesineet	Glassware, tableware and household utensils
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
C055	Työkalut ja laitteet kodin- ja puutarhanhoitoon	Tools and equipment for house and garden
C0551	Puutarhakoneet, muut työkonet	Garden appliances, other work appliances
C05510D	Puutarhakoneet, muut työkonet	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
C056	Tavarat ja palvelut tavanomaiseen kodinhoitoon	Goods and services for routine household maintenance
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
C06	TERVEYS	HEALTH
C061	Lääkintätuotteet, -laitteet ja -välineet	Medical products, appliances and equipment
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
C062	Avohoitopalvelut	Non-hospital medical and paramedical services
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
C063	Sairaalapalvelut	Hospital services
C0630	Sairaalapalvelut	Hospital services
C06300S	Sairaalapalvelut	Hospital services
C07	KULJETUS	TRANSPORT
C071	Kulkuvälineiden hankinnat	Purchase of vehicles
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	Yksityisten kulkuvälineiden käyttö	Operation of personal transport equipment
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	Kuljetuspalvelut	Transports services
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
C08	TIETOLIIKENNE	TELECOMMUNICATIONS
C081	Tietoliikenne	Telecommunications
C0811	Postipalvelut	Postal services
C08110S	Postipalvelut	Postal services
C0812	Tietoliikennelaitteet	Telecommunication equipment
C08120D	Tietoliikennelaitteet	Telecommunication equipment
C0813	Tietoliikennepalvelut	Telecommunication services
C08130S	Tietoliikennepalvelut	Telecommunication services
C09	VIRKISTYS JA KULTTUURI	RECREATION AND CULTURE
C091	Audiovisuaaliset, valokuvaus- ja tietojenkäsittelylaitteet	Audio-visual, photographic and data processing equipment
C0911	Äänen ja kuvan vastaanotto-, tallentamis- ja toistolaitteet	Equipment for reception, recording and reproduction of sound and images
C09111D	Radiot, äänentoistolaitteet yms.	Radios, sound reproduction equipment, etc.
C09112D	Televisiot ja videonauhurit	Televisions and video recorders
C09113SD	Viihde-elektronikan 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
C092	Muut suurehkot kestopulutusvarat virkistykseen ja kulttuuriin	Other major consumer durables for recreation and culture
C0921	Suurehkot kestopulutusvarat ulkoiluun	Major consumer durables for outdoor recreation
C09210D	Suurehkot kestopulutusvarat ulkoiluun	Major consumer durables for outdoor recreation
C0922	Suurehkot ajanviette- ja virkistystavarat sisäkäyttöön	Major durables for indoor recreation
C09220D	Suurehkot ajanviette- ja virkistystavarat sisäkäyttöön	Major durables for indoor recreation
C0923	Muiden suurehkojen ajanviettevälineiden ylläpito ja korjaus	Maintenance and repair of other major durables for recreation and culture
C09230S	Muiden suurehkojen ajanviettevälineiden ylläpito ja korjaus	Maintenance and repair of other major durables for recreation and culture
C093	Muut tavarat ja laitteet virkistykseen; puutarhatarvikkeet ja lemmikkieläimet	Other recreational items and equipment, garden supplies and pets
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
C094	Virkistys- ja kulttuuripalvelut	Recreational and cultural services
C0941	Urheilu- ja virkistyspalvelut	Sports and recreational services
C09411S	Urheilu- ja vapaa-ajanvälineiden vuokraus	Sports and leisure-time equipment rentals
C09412S	Muut urheilu- ja virkistyspalvelut	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
C095	Sanomalehdet, kirjat ja paperitarvikkeet	Newspapers, books and stationery
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
C096	Valmismatkat	Package tours
C0960	Valmismatkat	Package tours
C09600S	Valmismatkat	Package tours
C10	KOULUTUS	EDUCATION
C100	Koulutus	Educational services
C1000	Koulutus	Educational services
C10000S	Koulutus	Educational services
C11	RAVINTOLAT JA HOTELLIT	HOTELS, CAFES AND RESTAURANTS
C111	Ravitsemispalvelut	Catering services
C1111	Ravintolat ja kahvilat	Restaurants and cafes
C11110S	Ravintolat ja kahvilat	Restaurants and cafes
C1112	Ruokalat	Canteens
C11120S	Ruokalat	Canteens
C112	Majoituspalvelut	Accommodation services
C1120	Majoituspalvelut	Accommodation services
C11200S	Majoituspalvelut	Accommodation services
C12	SEKALAISET TAVARAT JA PALVELUT	MISCELLANEOUS GOODS AND SERVICES
C121	Henkilökohtaisen puhtauden ja kauneuden hoito	Personal hygiene and beauty care
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
C122	Prostituutio	Prostitution
C1220	Prostituutio	Prostitution
C12200S	Prostituutio	Prostitution

C123	Muualla luokittelemattomat henkilökohtaiset tavarat	Personal effects n.e.c.
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
C124	Sosiaaliturva	Social protection
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
C125	Vakuutus	Insurance
C1250	Vakuutus	Insurance
C12500S	Vakuutus	Insurance
C126	Rahoituspalvelut	Financial services n.e.c.
C1261	Todelliset rahoituspalvelut	Actual financial services
C12610S	Todelliset rahoituspalvelut	Actual financial services
C1262	Väilliset rahoituspalvelut	FISIM
C12620S	Väilliset rahoituspalvelut	FISIM
C127	Muut muualla luokittelemattomat palvelut	Other services n.e.c.
C1270	Muut muualla luokittelemattomat palvelut	Other services n.e.c.
C12700S	Muut muualla luokittelemattomat palvelut	Other services n.e.c.
P311Y	KOTITALOUKSIEN KULUTUSMENOT SUOMESSA	CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN FINLAND
KES(D)	KESTOKULUTUSTAVARAT	DURABLE GOODS
PUO(SD)	PUOLIKESTÄVÄT KULUTUSTAVARAT	SEMI-DURABLE GOODS
LYH(ND)	LYHYTIKÄISET TAVARAT	NON-DURABLE GOODS
PAL(S)	PALVELUT	SERVICES
TUR	TURISMIMENOT	EXPENDITURE ON TOURISM
P312Y	Suomalaisten kotitalouksien kulutusmenot ulkomailla	Consumption expenditure of resident households in the rest of the world
P313Y	Ulkomaalaisten kulutusmenot Suomessa	Consumption expenditure of non-resident households in Finland
P31Y	SUOMALAISTEN KOTITALOUKSIEN KULUTUSMENOT	CONSUMPTION EXPENDITURE OF RESIDENT HOUSEHOLDS
P32Y	Voittoa tavoittelemattomien yhteisöjen kulutusmenot	Consumption expenditure of non-profit institutions
YSU	YKSITYISET KULUTUSMENOT SUOMESSA	PRIVATE CONSUMPTION EXPENDITURE IN FINLAND
P3Y	YKSITYISET KULUTUSMENOT	PRIVATE CONSUMPTION EXPENDITURE
	13. KOTITALOUKSIA PALVELEVIEN VOITTOA TAVOITTELEMATTOMIEN YHTEISÖJEN YKSILÖLLISET KULUTUSMENOT	INDIVIDUAL CONSUMPTION EXPENDITURE BY NON PROFIT INSTITUTIONS SERVING HOUSEHOLDS
	14. JULKISYHTEISÖJEN YKSILÖLLISET KULUTUSMENOT	INDIVIDUAL CONSUMPTION EXPENDITURE BY GENERAL GOVERNMENT
	14.1 Asuminen	Housing
	14.2 Terveys	Health
	14.3 Virkistys ja kulttuuri	Recreation and Culture
	14.4 Koulutus	Education
	14.5 Sosiaaliturva	Social security

10.3.2 Gross fixed capital formation and changes in inventories

A comparison has been made with the AN classification in ESA95. 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
P51 Gross fixed-capital formation		
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)
P52 Change in inventories	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 a classification of economic activities and a 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 show 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, inc. 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 is 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 6000 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 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 data base. 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> 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.
<i>Reporting units:</i> 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.
<i>Periodicity:</i> Annual, additions of new units from the National Board of Taxation every quarter.
<i>Variables collected:</i> The key variables collected are turnover, employees, self-employed persons, industry, location of activity.
<i>Methods used to allow for missing data:</i> 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 Central Pension Security Institute data concerning self-employed pension contributors.
<i>Adjustments made for conceptual differences from national accounts concepts:</i> Reviews applying to classifications of units by sector, for example enterprises with zero turnover.
<i>Further adjustments made to the data:</i> None

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. This data is 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 1995 Classification by industry, classification by size depending on the number of staff, classification by institutional sector, juridical 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 unit 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 a 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 a 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 a 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. The biggest undercoverage corrections are for companies whose turnover in the business register exceeds one hundred million Finnish marks, but for which data are omitted. Imputed data are not approved for the biggest companies of all (turnover exceeding FIM 500 million). Data for all of the above must be retrieved either from financial statement publications or from the National Board of Patents and Registration of Trademarks (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> Structural business statistics (survey of annual accounts)
<i>Link to the surveys undertaken at the European level:</i> Structural business statistics
<i>Reporting units:</i> Enterprise (legal unit)
<i>Periodicity y:</i> Annual
<i>Time of availability of results:</i> 12-15 months
<i>Sampling frame:</i> Business register
<i>Survey compulsory or voluntary:</i> Compulsory
<i>Main features of survey methodology:</i> 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.
<i>Population size:</i> Roughly 220 000 (Industries C – O; excluding J, L)
<i>Sample size:</i> Number in direct survey approx. 8 500
Survey response rate: 85 % on average
Methods used to impute for missing data: Cf. above
Variable used for grossing-up to the population: Results of direct survey not raised to basic population level. Instead, administrative data and other data are combined.
Sample coverage as a percentage in terms of variable used for grossing-up: Cf. Preceding panel
Main variables collected: Profit and loss statement and balance sheets; turnover by industry; breakdown of profit and

<i>expenditure; breakdown of balance sheet; breakdown of fixed assets; data applying to staff; imports and exports</i>
<i>Adjustments made for conceptual differences from national accounts:</i> Adaptations entailed by economic transactions in the national accounts, e.g. relating to semi-finished products
Further adjustments made to the data: <i>None</i>

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 failure rate in 1999 averaged 14.2 %.

Besides the failure rate, the results of the Labour Force Survey contained a number of other risk factors. The most important of these was 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 – 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 15th 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> Labour Force Survey
<i>Link to the surveys undertaken at the European level:</i> Based on the recommendations of the International Labour Organisation, adheres to procedures of the EU labour force survey.
<i>Reporting units:</i> Individuals
<i>Periodicity:</i> Continuous, monthly
<i>Time of availability of results:</i> Roughly three weeks from survey month, annual data roughly one month from the turn of the year
<i>Sampling frame:</i> Population information system (Register)
<i>Survey compulsory or voluntary:</i> Voluntary
<i>Main features of survey methodology:</i> Divided into sample rotations, gradually altered panel survey, computer-assisted, mainly telephone interviews (98%)
<i>Population size:</i> Resident population aged 15–74 years (including those aged 14 years on the sample date)
<i>Sample size:</i> About 12 000 persons/month, 36 000 persons/quarter
<i>Survey response rate:</i> 84–86 % (net)
Methods used to impute missing data: <i>Failure to respond is compensated by use of post-stratification, missing working hours replaced by mean values of corresponding type of group (substitution)</i>
Variable used for grossing-up to the population: <i>Number of split lot population/number of responses (Also calibration, or more efficient estimating using job applicant register)</i>
Sample coverage as a percentage in terms of variable used for grossing-up: <i>Monthly sample covers 0.3 % of basic population, quarterly sample 0.9 % and annual sample 3.4 %</i>
Main variables collected: <i>Labour force, employed, unemployed, occupation, working hours, industry, quality of employment relationship</i>
<i>Adjustments made for conceptual differences from national accounts concepts:</i> Conscripts, transition to domestic concept
Further adjustments made to the data: <i>None</i>

11.1.6 Financial Statement and Report data of Central Government

The central government accounting system was reformed, starting on 1.1.1998. 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 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 Treasury consist of on-budget accounting and budget accounting. The onus in on-budget accounting is to accurately reflect 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>	Statistics on the finances and activities of municipalities and joint municipal authorities
<i>Organisation collecting the data:</i>	Statistics Finland, General government finances
<i>Reporting units:</i>	All municipalities (totalling 452 in 2000) and joint municipal authorities (totalling 246 in 2000), aggregate data
<i>Periodicity:</i>	Ongoing annual statistics (survey occurs each year after closing of books)
<i>Variables collected:</i>	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.

<i>Methods used to allow for missing data:</i>	None, all form data are requested from suppliers of municipal/joint municipal authority accounting statistics at review stage and checked
<i>Adjustments made for conceptual differences from national accounts concepts:</i>	None
<i>- Coverage:</i>	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)
<i>- Demarcation due to type of producer:</i>	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.
<i>- Classification</i>	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 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.
<i>- Timing:</i>	Timing adjustment of taxes
<i>- Other data adaptations:</i>	Tax data of municipalities (sector accounts) are taken from data in the monthly settlement system of the tax administration
	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.
	Capital transfers to and from central government are taken from central government accounting records

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. The most important descriptions are attached to a description of volume methods to be compiled later.

Producer price indices

Producer price indices 1995 = 100

- * Producer Price Index, home sales 1995=100
- * Export Price Index 1995=100
- * Import Price Index 1995=100
- * Basic Price Index for Domestic Supply 1995=100
- * Wholesale Price Index 1995=100

The concept of producer price index has been changed to correspond to the common European Union practice. The new producer price index, home sales 1995=100 includes only home market goods, whereas the producer price index for manufactured products 1990 = 100 covered the entire industrial production in Finland, both home market goods and export goods.

In producer price indices 1995=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 1995=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 1995=100 covers commodities classified in Sections C - E.

The Export Price Index 1995=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 1995=100 covers commodities classified in Sections A – E.

The Import Price Index 1995=100 measures trends in c.i.f. prices (cost, insurance and freight to the border of the importing country) of imported goods. Export prices denominated in foreign currencies are converted to Finnish markkas at the average exchange rate for the reference month. The Import Price Index 1995=100 covers commodities classified in Sections A – E.

The Basic Price Index for Domestic Supply 1995=100 measures trends in prices of goods for use in Finland as they arrive on 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 1995=100 covers commodities classified in Sections A – F.

The Wholesale Price Index 1995=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 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 1995=100 covers commodities classified in Sections A – E.

Central government expenditure price index

Central government expenditure price indices measure price trends for central government and local authority expenditure. 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 1995.

Consumer Price Index

The Consumer Price Index describes price trends of goods and services purchased by households resident in Finland, keeping the consumer basket and weighting the same throughout the calculation period of the index.

Laspeyre's price index formula, in which consumer portions used as weightings are from when the index originated, is used to calculate the Consumer Price Index.

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 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 (VTV). 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 employee Wages and Salary Earnings Index 1995=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 Wages and Salary Earnings Index 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 wages. The group comprises 165 median earnings series which are weighted together on the basis of weightings according to total earnings.

The Wages and Salary Earnings Index 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 Wages 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 organisations. The central government sector includes only units involved in on-budget activities. Level-of-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 level-of-earnings index are also broken down by gender. Gender, however, is not officially a basis for calculating the level-of-earnings index. 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 external trade data in the European Union. Statistical data on trade between the Union and non-member States (external trade) is obtained by the customs clearance system. Data on trade between Member States (internal trade) is 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), that 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 10th working day of the following month.

External trade

Declarations of external trade statistics are based on Commission Regulation No 1172/95 (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
- export of goods for outward job processing
- export of Community status goods from a customs warehouse or customs-free area
- unpaid warranty or compensation deliveries
- various aid consignments (e.g. export 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 is 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

Household Budget Survey data are used as basic material for the consumption expenditure of households. The results are also used to calculate production by branch of activity to some extent.

The Household Budget Survey's target group is the entire population of Finnish households but not that of institutions. Household Budget Surveys were conducted most recently in 1994, 1995, 1996 and 1998. The first three of these were based on a small sample, the last on a bigger sample. The Household Budget Survey produces data on households' consumption, the structure of consumption and the way is divided between population groups.

The population is the households permanently resident in Finland. The households interviewed are selected on the basis of data in the population register on an individual basis. Data are collected in three ways: by interview, by bookkeeping and by selecting the data from administrative registers.

<i>Name of survey:</i> Household Budget Survey
<i>Link to the surveys undertaken at the European level:</i> Harmonised concepts, definitions and classifications
<i>Reporting units:</i> Households
<i>Periodicity:</i> Every third year, starting in 1998
<i>Time of availability of results:</i> Less than two years
<i>Sampling frame:</i> Population register data
<i>Survey compulsory or voluntary:</i> Voluntary
<i>Main features of survey methodology:</i> 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.
<i>Population size:</i> Households permanently resident in Finland
<i>Sample size:</i> 7020
<i>Survey response rate:</i> roughly 63.4 % in 1998
Methods used to impute for missing data: <i>Efforts are made to eliminate the impact of an unevenly divided failure to respond by calibrating the weighting coefficients of the original sampling arrays.</i>
Variable used for grossing-up to the population): <i>Structure and number of households</i>
Sample coverage as a percentage in terms of variable used for grossing-up:
Main variables collected: <i>Households' final consumption expenditure by types of product. Data are also collected on total income and expenditure, debts, use of welfare services. Data are classified by area.</i>
<i>Adjustments made for conceptual differences from national accounts concepts:</i> Adaptations are made to households' final consumption expenditure for some

product groups, e.g. insurance services.

<i>Further adjustments made to the data:</i>
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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 1**National accounts product classification (KTTL)**

KTTL	HEADING
011112	Common wheat and mixed wheat/rye cereal (Durum wheat)
011113	Maize
011114	Rice, not hulled
011115	Barley
0111161	Rye
0111163	Oats
011117	Other cereal
011121	Potatoes
011122	Dried, shelled or podded legumes
011130	Seeds and fruit of oleaginous plants
011140	Uncured tobacco
011151	Sugar beet
011152	Sugar cane
011160	Grasses and fodder plants
011170	Raw plant matter used in textiles (cotton, linen and suchlike)
011180	Vulcanised rubber
011191	Raw plant matter for manufacturing
011192	Seeds of sugar beet and fodder plants
012111	Carrots
012112	Other tubers
012121	Tomatoes
012122	Cucumbers
012123	Other vegetables bearing fruit (beans, peas, peppers, melons and suchlike)
012131	Lettuces
012132	Cabbages
012133	Other vegetables (aromatic herbs and spices)
012134	Grower's mushrooms
01221	Seedlings, bulbs, corms, and tubers
01222	Ornamental plants
01223	Seeds of flowers and plants
011310	Grapes
011321	Bananas, pineapples, coconuts and suchlike
011322	Citrus fruits
011323	Other fruits and nuts
011325	Grower's berries
011326	Wild berries
011327	Wild mushrooms
011328	Other cropped products
011331	Coffee, unroasted
011332	Tea, packed weight > 3 kg
011334	Cocoa beans
011340	Aromatic herbs and spices, unprocessed
012110	Cattle
012120	Milk, unprocessed
012211	Sheep, goats
012213	Horses
012214	Reindeer meat, reindeer hides
012230	Wool and animal hair
012310	Live pigs
012410	Live poultry
012420	Eggs, fresh
012510	Other live animals
012521	Bee's honey

012525	Other animal products
012530	Untanned pelts
014000	Agricultural services
015010	Game meat
015020	Game propagation, services ancillary to hunting
021110	Forest tree saplings
021120	Sylviculture
0212111	Pine sawtimber
0212112	Spruce sawtimber
021212	Deciduous tree sawtimber (other than evergreens)
0212131	Pine pulpwood
0212132	Spruce pulpwood
0212133	Deciduous tree pulpwood
021214	Firewood and chips
021215	Other round timber (special timber species)
021220	Logging and short distance haulage
021910	Other forestry products
021920	Other forestry services
050011	Fish, live (fish fry)
050012	Fish, fresh or frozen
050014	Fish, from leisure angling
050020	Other fisheries industry products
050050	Fisheries services
101010	Charcoal
103010	Peat
111010	Petroleum and bituminous oils from minerals, crude
111020	Natural gas in a liquid or gaseous state
111030	Services for the transport of natural gas in a liquefied or gaseous state
111040	Bitumen- or petroleum bearing shale and bituminous sand
112010	Services ancillary to petroleum and gas production, excluding geological surveys
120010	Uranium and thorium ores
131010	Iron ores
132011	Copper ores and copper concentrates
132012	Nickel ores and concentrates
132013	Aluminium ores and concentrates
132014	Precious metal ores and concentrates
132015	Lead, zinc and tin ores and concentrates
132016	Other non-ferrous ores and concentrates
141111	Marble and other monumental and building limestone
141112	Granite, sandstone and other monumental and building stone
141210	Limestone and selenite
141220	Chalk and Dolomite
141310	Slate
142111	Natural sand
142112	Crushed rock, chips and stone dust: pebbles, gravel, broken or crushed stone
142113	Chippings; tar macadam
142190	Quarrying, screening, grading, stone crushing and other suchlike processing services for gravel or sand
142210	Clay and kaolin
143011	Natural calcium or calcium aluminate phosphate; carnalite, sylvinitite and other raw natural calcium alts
143012	Unfired iron pyrites; raw and unrefined sulphur
143013	Other chemical minerals
144010	Salt and pure sodium chloride
145010	Natural bitumen and asphalt; asphaltites and pitch
145022	Industrial diamonds; pumice stone; emery; natural corundum, natural granite and other naturally occurring abrasive materials; precious stones

145023	Other minerals, n.e.c.
151111	Meat of bovine animals, fresh, chilled and frozen
151113	Meat of swine, fresh, chilled and frozen
151115	Mutton, fresh, chilled and frozen
151117	Other meat and other edible animal parts
151190	Slaughtering services
151120	Animal hair, untanned bovine and equine hides and skins
151130	Fat of bovine animals, sheep, goat, swine and poultry
151140	Raw animal parts, unfit for human consumption
151210	Meat and edible parts of poultry, reindeer and game
151220	Feathers and feather-covered poultry skins
151311	Meat and other edible animal parts, salted, in salt water, dried or smoked; fine or coarse edible meal prepared from meat and other animal parts
1513121	Sausages
1513129	Processed and tinned meat products, prepared foods and products from other animal parts or blood (meat of swine or bovine animals and suchlike)
151313	Fine or coarse meal or pellets unfit for human consumption prepared from meat; animal fat residues
151390	Production of meat preparations for services related to cooking and other forms of preparation
152011	Fish fillet, other fish flesh and fish liver, roe and milt, fresh or chilled
152012	Fish fillet, other fish flesh and fish liver, roe and milt, frozen
152013	Fish, dried, salted or in salt water; smoked fish; edible fish meal
152014	Fish preparations and tinned fish
152015	Shellfish, frozen; molluscs and other invertebrates living in water, frozen, dried, salted or in salt water
152016	Shellfish, frozen; molluscs and other invertebrates living in water, prepared or tinned
152017	Fish meal or pellets, unfit for human consumption
153110	Potato products
153210	Fruit and plant juices
153310	Processed or tinned vegetables (excluding potatoes)
153320	Processed or tinned fruits and nuts
153330	Residues and by-products of plant matter or plant origin and waste and by-products of plant origin
153390	Services related to cooking and other forms of preparation to preserve fruit and vegetables
154110	Plant and animal oils and fats, raw
154130	Solid waste from linseed and other vegetable fats or oils; ground oil seed or oil fruit
154200	Purified oils and fats
154310	Margarine and suchlike edible fats
155110	Processed liquid milk and cream
155120	Milk and cream in solid form
155130	Butter and spreadable milk fats
155140	Cheese and cheese matter
155150	Other dairy products
155210	Ice cream, ice lollies and suchlike frozen products
156110	Processed rice
156120	Meal prepared from cereal and vegetables; suchlike mixes
156130	Groats, coarse meal and cereal pellets and other cereal products
156140	Polished rice
156150	Bran, bran meal, and other waste products from cereal processing
156200	Starch and starch products
157100	Prepared fodder for domestic animals
157210	Prepared pet foods
158110	Fresh bread and confectionery

158210	Rusks and biscuits; preserved confectionery
158310	Sugar
158320	Sugar beet pulp, and other waste sugarcane products
158410	Cocoa
158420	Chocolate and sugar products
158510	Macaroni, noodles, couscous and suchlike flour products
158611	Coffee, decaffeinated and roasted
158613	Tea, tea products and herb tea
158700	Condiments and condiment sauces
158810	Homogenised food preparations and diet foods
158910	Soups, fresh eggs, yeast and other foodstuffs
158920	Vegetable juices and vegetable extracts, pectin compounds, gluten and thickeners
158990	Services related to cooking and other forms of foodstuffs preparation (excl. meat and vegetables)
159110	Distilled alcoholic beverages
159211	Ethyl alcohol and other denatured strong spirits
159310	Wines
159410	Cider and other fruit wines
159510	Other undistilled fermented beverages
159610	Beer
159620	Distiller's grain and other brewery and distillery waste
159710	Malts
159810	Mineral water and soft drinks
160010	Tobacco products
160020	Tobacco waste
171020	Natural fibres, processed for weaving
171030	Discontinuous manmade fibres, processed for weaving
171043	Textile yarn of natural fibre, not for retail sale
171045	Sewing yarn and other thread
171051	Textile yarn of synthetic filament or discontinuous synthetic fibre, not for retail sale
171055	Sewing thread of converted fibre and synthetic filament and converted and synthetic fibres
171060	Silk, wool and cotton waste
172010	Woven fabrics (excl. special fabrics) of a natural fibre other than cotton
172020	Woven fabrics (excl. special fabrics) of cotton
172030	Woven fabrics (excl. special fabrics) of synthetic filament or discontinuous synthetic fibre
172040	Fabrics with a raised nap, frotee and other special fabrics
173000	Finishing services for textiles
174010	Blankets and rugs, bedding, tablecloths, towels, curtaining, blinds, other interior furnishings
174021	Sacks and bags (textile), for packing goods
174022	Tarpaulins, awnings and sunshades; sails for boats, yachts or land vehicles; tents and camping equipment
174023	Parachutes (also guided) and rotochutes; parts for same
174024	Sleeping bags; bedding paraphernalia
174025	Other fitted textile products, clothing patterns
174090	Repair services for tarpaulins and camping equipment
175100	Carpets and rya rugs
175200	Twine, cord, string and netting
175310	Non-woven fabric and products, except clothing
175410	Tulle, lace, woven ribbons, braids and embroidered goods
175420	Felt, faced, covered or layered
175430	Other textile goods (wadding, textile products for technical applications and suchlike)
176010	Knitteds and crocheted fabrics
177110	Knitted socks
177210	Knitted sweaters, jackets and suchlike goods

181010	Leather apparel
182100	Work clothes
182200	Outerwear
182240	Used apparel and other clothing goods
182300	Underwear
182400	Other apparel and accessories, n.e.c.
183011	Tanned and dressed furs
183012	Apparel, clothing goods and other goods manufactured from furs, other than headgear
183013	Artificial furs and goods manufactured from same
191000	Leather
192011	Saddles and harnessing for all animals
192012	Suitcases, handbags and suchlike goods
193010	Footwear, other than athletic and protective footwear
193020	Athletic footwear
193030	Protective and other footwear, n.e.c.
193040	Footwear accessories
193090	Footwear processing and manufacturing services
201010	Wood, sawn or whittled with the grain, planed or lathe-turned veneer, thickness > 6 mm; wooden railway or tramway sleepers, unimpregnated
201020	Wood, formed on one or more edges or planes throughout its length; wood wool; wood flour; wood as shavings or chips
201030	Roundwood; wooden railway or tramway sleepers, impregnated or otherwise treated
201040	Sawdust and waste wood
201090	Wood impregnation and other services for manufacturing and treating timber goods
202010	Sheets and panels
202020	Wood veneer; veneer used in manufacturing cross-adhered veneer; compacted wood
203011	Windows, French windows and window frames, doors and door frames, thresholds, of wood
203012	Parquet flooring tiles, concrete formwork, roofing shingles and shakes, of wood
203013	Carpentry and joinery products, n.e.c.
203020	Prefabricated buildings, of wood
203090	Manufacturing and processing services for carpentry and joinery products
204010	Wood bundles
205110	Other wood products
205210	Cork, cane and other wicker goods; basket and wickerwork
211110	Pulp manufactured from wood or other fibrous cellulose material
211210	Newsprint, other uncoated paper, board or paperboard for graphic purposes
211220	Toilet tissue, uncoated kraftliner and other uncoated paper, board or paperboard
211230	Other uncoated paper, board and paperboard; tobacco paper, not cut to size
211240	Parchment paper, greaseproof papers, tracing papers and other glazed papers
211250	Processed paper, board and paperboard
211260	Paper, board and paperboard waste
211290	Manufacturing and processing services for pulp, paper and paper products
212110	Corrugated paper, board, and paperboard, and paper, board, and paperboard packaging
212211	Toilet tissue, handkerchiefs, facial towels, hand towels and other towels, tablecloths and napkins, of paper
212212	Sanitary and hospital goods, apparel and clothing goods, papermaking pulp, paper, cellulose wadding and suchlike
212213	Trays, bowls, basins, plates, cups, beakers and suchlike goods, of paper, board or paperboard
212310	Commercial paper goods (carbon paper, envelopes and suchlike paper goods)
212410	Curtaining and other wall coverings
212511	Paper, board and paper-based flooring

212512	Paper, board or paperboard name and address tags
212513	Filters, filter sheets and boards of paper pulp
212514	Tobacco paper; bobbins, rungs, cops and suchlike insoles; filter paper, filter board and paper board; other paper, board and paperboard products, n.e.c.
221110	Books, brochures and leaflets, as loose leaf
221120	Books, brochures, leaflets and suchlike printed products
221130	Dictionaries, music books, printed scores
221200	Newspapers and periodicals
221290	Newspapers and periodicals, subscription
221410	Audio recordings (voice records and CDs and suchlike)
221510	Post cards, greeting cards, pictures, calendars and like printed products
222110	Services relating to newspaper printing
222211	New postage stamps; watermarked paper; cheque forms; currency and suchlike securities
222212	Commercial copy, commercial catalogues and suchlike products
222213	Other printed products, n.e.c.
222220	Office ledgers, accounting books, albums, forms and other stationery supplies, of paper, board or paper board
222231	Printing of books
222232	Other services related to printing, n.e.c.
222310	Bookbinding and finishing services
222410	Typesetting and manufacturing services for printing blocks
222420	Printing blocks and drums and other printed material used in printing
222510	Other graphic services
223110	Audio recording reproduction services
223210	Video recording reproduction services
223310	Software reproduction services
231010	Coke and low-temperature coke obtained from coal, brown coal or peat; gas carbon
231020	Coal, brown coal or tar and other mineral tar
232011	Petroleum, aviation fuel
232012	Jet propulsion fuel
232013	Naphtha and suchlike fuel
232014	Petroleum, also aviation fuel
2320151	Diesel oil
2320159	Distillate fuel oil
232016	Other medium-weight crude oils; medium-weight finished products, n.e.c.
232017	Heavy fuel oils
232018	Crude lubricating oils; heavy finished products, n.e.c.
232021	Propane and butane, liquefied
232022	Ethylene, propylene, butylene, butadiene and other crude oil gases or non-gaseous hydrocarbons, not natural gas
232031	Vaseline; paraffin; crude oil wax and other waxes
232032	Crude oil coke, crude oil bitumen and other crude oil waste products
232090	Cleaning, mixing, processing and manufacturing services for oil and 232 similar products
233000	Nuclear fuel
241110	Industrial gases
241200	Colours and pigments
241300	Other inorganic base chemicals
241400	Other organic base chemicals
241480	Spent lye as a by-product of manufactured wood pulp, other than pine oil
241510	Nitric acid (nitration acid); ammonia
241520	Ammonium chloride; nitrite; potassium nitrate; ammonium carbonate
241530	Nitrogen fertilisers, mineral or chemical
241540	Phosphate fertilisers, mineral or chemical

241550	Potash fertilisers, mineral or chemical
241560	Manure and compost, n.e.c.
241570	Potassium nitrate
241580	Fertilisers, n.e.c.
241600	Virgin plastic (plastic materials)
241710	Synthetic prime rubber
242010	Insecticides and herbicides, disinfectants for retail sale
243010	Paints and varnishes based on polymers
243020	Other paints and varnishes and related products; artists' colours
243024	Printer's inks
244100	Ingredients for medicines
244200	Medicinal preparations
244224	Sticking plasters, catgut and other suchlike materials; First Aid boxes
245100	Glycerol; soap and washing, cleansing and polishing materials
245210	Perfumes and toilet preparations
246110	Explosives; fireworks kits
246210	Adhesives and gelatines
246310	Ethereal oils
246410	Photographic chemicals, plates and films
246510	Manufactured unused recording equipment (magnetic tapes, disks, magnetic cards and suchlike)
246610	Chemically converted animal or vegetable fats and oils; mixtures prepared from animal or vegetable fats and oils unfit for human consumption
246620	Writing and drawing inks, including Indian ink and other inks
246630	Lubrication products; additives; anti-freeze products
246640	Miscellaneous other chemical products
247000	Synthetic fibres
251110	New rubber tyres
251120	Used pneumatic tyres, of rubber
251210	Retreaded pneumatic tyres, of rubber
251310	Regenerated rubber in primary form or in slabs, sheets or strips
251320	Unvulcanised rubber and goods manufactured therefrom; vulcanised rubber, other than ebonite, in the form of rubber strand, single or double ply, slabs, sheets, strips, bars or profiles
251330	Pipes and hoses of vulcanised rubber, not ebonite
251340	Conveyor and drive belts, of vulcanised rubber
251350	Rubberised fabrics, other than corded fabric for motor tyres
251360	Apparel and clothing goods of vulcanised rubber, not of ebonite
251370	Other vulcanised rubber goods n.e.c.; ebonite; ebonite goods
251380	Waste, off cuts and scrap rubber (not of ebonite); powder and pellets
252110	Monofilament yarn with a cross section > 1 mm, rods, bars and profiles, of plastic
252120	Pipes and hoses and connectors thereto and other parts, of plastic
252130	Slabs, sheets, films, strips and yarn, of plastic, supporting other materials or discrete accordingly
252140	Other slabs, sheets, films, strips and yarns, of plastic
252210	Plastic packaging supplies
252311	Plastic flooring and wall or ceiling coatings, in rolls or slabs
252312	Plastic bathtubs, washbasins, toilet bowls and covers, cisterns and suchlike sanitary goods
252313	Plastic cisterns, basins, vats and suchlike products, capacity > 300 l
252314	Doors, windows, door and window frames; window shutters, blinds and suchlike; parts, of plastic, other building plastics
252320	Plastic prefabricated buildings
252410	Apparel and clothing goods, incl. gloves, of plastic
252421	Adhesive tape, tabs, strips, sheets, film and other plastic in rolls
252423	Table and kitchen utensils, other domestic and toilet articles, of plastic

252424	Light fittings and lighting equipment, lighted nameplates and suchlike products with plastic parts
252425	Protective headgear; hats and other headgear, of rubber or plastic
252426	Plastic insulation materials
252427	Plastic office and school supplies
252428	Fittings and accessories for furniture, motor vehicle bodies and suchlike; ornamental articles; other plastic articles
252490	Services related to manufacturing plastic parts
261110	Flat glass
261210	Fashioned or dressed flat glass
261310	Glass bottles, jars, vases and other articles used as table or kitchenware and suchlike
261410	Glass fibre
261510	Other glass, semi-finished
261520	Glass for technical applications and other glass
262110	Ceramic domestic and ornamental articles
262210	Ceramic sanitary fittings
262310	Ceramic insulators and insulating materials
262410	Ceramic goods for laboratory, chemical or other technical applications
262510	Ceramic goods n.e.c.
262610	Fireproof ceramic goods
263010	Ceramic bricks and tiles
264010	Bricks and building materials, burnt unglazed clay
265110	Cement
265210	Lime
265310	Gypsum
266110	Concrete products for construction purposes
266120	Prefabricated buildings of concrete
266210	Gypsum products for construction purposes
266310	Ready mixed concrete
266410	Masonry mortar
266510	Fibre cement products
266610	Other gypsum, concrete and cement products
267010	Monumental and construction stone and goods manufactured thereof
268110	Grinding products
268211	Dressed asbestos fibres; mixtures based on asbestos; goods manufactured from such mixtures; friction materials for brakes, clutches and suchlike goods, uninstalled
268212	Goods manufactured from asphalt and suchlike materials
268216	Other non-metal mineral products
268290	Manufacturing and processing services for non-metal mineral products
271010	Iron and steel
271020	Billets, other primary or semi-finished materials, of iron or unalloyed steel
271030	Billets, other primary or semi-finished materials, of stainless steel or other steel alloys
271040	Sheet products, of iron or steel
271050	Bars, hot rolled, irregularly coiled
271060	Other bars
271070	Profiles of iron or unalloyed steel, manufactured only as hot rolled, hot drawn or extruded
271080	Sheet pile iron and steel; railway building components, of iron or steel
271090	Slag, mill scale, ferrous waste and scrap and bars from melted scrap
272100	Pipes and connectors, of cast iron
272200	Pipes and connectors, of steel
273100	Cold drawn iron and steel products
273200	Cold rolled steel band
273300	Cold dressed or cold formed products, of iron or steel

273400	Steel wire
273500	Ferrous alloys (not ECSC products) and other iron and steel, n.e.c.
274110	Silver, undressed, semi-finished or in powder form
274120	Gold, undressed, semi-finished or in powder form
274130	Platinum, undressed, semi-finished or in powder form
274140	Gold-plated base metal or silver, undressed or in semi-finished form (silver-plated scrap noble metals)
274211	Aluminium, undressed
274212	Aluminium oxide
274221	Aluminium powder and flake
274222	Aluminium bars and profiles
274223	Aluminium wire
274224	Aluminium sheet and strip, thickness > 0.2 mm
274225	Aluminium foil, thickness < 0.2 mm
274226	Pipes and connectors and other parts, of aluminium
274230	Aluminium waste and scrap; ash and waste primarily containing aluminium
274310	Lead, zinc and tin, undressed
274320	Semi-finished goods of lead, zinc or tin and alloys therefrom
274330	Lead, zinc and tin waste and scrap; ash and waste primarily containing lead, zinc or tin
274410	Undressed copper; copper matte; face hardened copper
274420	Semi-finished goods of copper or copper alloy
274430	Copper waste and scrap; ash and waste primarily containing copper
274511	Raw nickel matte, nickel oxide sinters and other indirect products of nickel manufacturing
274512	Undressed nickel
274520	Semi-finished goods of nickel or nickel alloys
274530	Other coloured metals and goods made therefrom; cermets; ash and waste containing metals or metal compounds
274540	Nickel waste and scrap ash and waste containing metals or metal compounds
274590	Manufacturing and processing services for base metals (excl. zinc articles)
275110	Other parts for machinery and other equipment, of cast iron, manufacturing service
275210	Machinery and other mechanical parts for land vehicles and piston engines, manufacturing service, other castings
275310	Machinery and other mechanical parts for land vehicles and piston engines, light metal castings, manufacturing service
275410	Machinery and other mechanical parts for transmissions, crankshafts and piston engines, other castings, manufacturing service
281110	Prefabricated buildings, of metal
281120	Metal structures and parts thereof (bridges and bridge elements, towers and pylons, other constructions and parts)
281190	Installation of self-manufactured metal structures on site
281210	Doors, windows, door and window frames and thresholds, of iron, steel or aluminium
282110	Cisterns, basins and vessels, of iron, steel or aluminium
282190	Repair and maintenance services for metal cisterns, basins and vessels
282211	Central heating radiators, not heated by electric power, of iron or steel
282212	Central heating boilers
282213	Parts for central heating boilers
282290	Installation, repair and maintenance services for central heating boilers
283011	Steam boilers and other steam generators; hot water boilers
283012	Accessories for steam generators and boilers; steam engine condensers
283013	Parts for steam boilers
283020	Nuclear reactors and parts thereof
283091	Installation services for steam boilers and pipe systems thereof
283092	Repair and maintenance services for steam boilers
284000	Metal forging, pressing, die cutting and rolling services; powder metallurgy
285100	Metal working and coating services
285200	Services related to the mechanical working of metal
286111	Knives, scissors and blades thereof; electric shavers and cutting blades thereof; other

	cutting equipment
286114	Spoons, forks, ladles, ladles with holes, cake servers, etc. and suchlike kitchen and cutlery equipment
286210	Handcraft tools, such as are used in agriculture, horticulture or forestry
286220	Manual saws; miscellaneous saw blades
286230	Other handcraft tools
286240	Replacement tools, for manual or power tools, or for machine tools
286250	Other tools
286300	Locks and hinges
287110	Basins, barrels, cans, boxes, containers and suchlike, for all substances (not gaseous), of iron or steel
287210	Light metal packages
287310	Metal wire products
287400	Fasteners, screw machine products, chains and springs
287511	Sinks and wash basins, bathtubs and other sanitary fittings and parts thereof, of iron, steel, copper or aluminium
287512	Table, kitchen and domestic articles and parts thereof, of iron, steel, copper or aluminium
287521	Armour plated or reinforced safes, cash boxes and doors, of base metal
287522	Small office and writing table supplies, of base metal and suchlike
287526	Vessel propellers and propeller blades
287527	Other goods of base metal, n.e.c.
287590	Manufacturing and processing services for metal products (excl. machines and equipment)
291111	Outboard engines for marine craft
291112	Spark ignition engines for marine craft; other engines
291113	Other compression ignited, piston driven engines (excl. aircraft and vehicles)
291120	Turbines
291130	Turbine parts
291191	Installation services for engines and turbines (excl. aircraft and vehicle engines)
291192	Repair and maintenance services for engines and turbines (excl. aircraft and vehicle engines)
291210	Hydraulic and pneumatic power machines and engines
291220	Fluid pumps; Hydraulic elevators
291230	Air and vacuum pumps; air or gas compressors
291240	Parts for pumps, compressors and hydraulic and pneumatic power machines and engines
291291	Installation services for pumps and compressors
291292	Repair and maintenance services for pumps and compressors
291310	Taps, valves, and suchlike equipment for conduit, steam boilers, cisterns, basins, etc.
291320	Parts for taps, valves, and suchlike goods
291390	Repair and maintenance services for taps and valves
291410	Ball bearings and ball races
291420	Other bearings, cogwheels and gearwheel and steering elements
291430	Parts for bearings, gearwheel and steering elements
292110	Industrial ovens and firebox burners and parts thereof
292190	Installation, repair and maintenance services for industrial ovens and firebox burners
292211	Tackle and pulley systems, n.e.c.
292212	Mining winches; winches especially designed for use underground other winches; jacking screws
292213	Pulley levers; motor vehicle jacks
292214	Booms; cranes; movable gantries, forklift trucks and hoisting trucks
292215	Forklift trucks, other trucks; tractors for use in train stations
292216	Lifts and tipping gear winches, escalators and moving corridors
292217	Pneumatic or other continuous operation lifts and conveyors for goods or materials
292218	Other hoisting, processing, loading or unloading machines

292219	Parts for hoisting and processing equipment
292220	Buckets, also grabbing buckets, and clamps for cranes, mining machinery and suchlike machines
292291	Installation services for hoists and moving equipment, not for lifts or escalators
292292	Repair and maintenance services for hoists and moving equipment
292311	Heat exchangers and liquefaction equipment for air or other gases
292312	Air conditioning equipment
292313	Cooling and freezing equipment and heat pumps, other than domestic type appliances
292314	Gas filtering and cleaning machines and equipment, n.e.c.
292320	Fans, other than table, floor, wall, window mounted or ceiling fans
292330	Parts for cooling and freezing equipment and heat pumps
292391	Installation services for cooling and ventilation equipment and heat pumps, other than domestic type appliances
292392	Repair and maintenance services for cooling and freezing equipment and heat pumps, other than domestic type appliances
292411	Generators or water gas generators; acetylene gas and suchlike equipment; distillation and rectification equipment
292412	Filter and cleansing machines and equipment for fluids
292413	Oil filters, petroleum filters and other suction air filters, for combustion engines
292421	Machines and equipment for cleaning, filling, packing and wrapping bottles or other vessels
292422	Domestic weighing scales and kitchen weighing scales; weighing scales for continuous weighing of moving goods
292423	Weighing scales, n.e.c. (checking, sorting and retail sale weighing scales)
292424	Fire extinguishers, power spray guns, steam or sandblasting machines, and suchlike mechanical equipment (not for agriculture)
292425	Gaskets manufactured from metal sheet; mechanical gaskets
292430	Centrifuges, calendering machines and automatic vending machines
292440	Other machines for processing materials, n.e.c. by the method of altering temperature
292450	Other machines parts for general use
292460	Dishwashers, industrial type
292470	Parts for dishwashers and for cleaning, filling, packing and wrapping machines
292491	Installation services for other machines for general use, n.e.c.
292492	Repair and maintenance services for other machines for general use, n.e.c.
293100	Farming tractors
293210	Farming and forestry machines for landscaping and cultivation; lawn or athletic field rollers
293220	Lawnmowers
293230	Harvesting machines
293240	Liquid or powder spraying, spreading or misting machines for agricultural or horticultural use
293250	Self-loading and unloading trailers and semi-trailers for use in agriculture
293261	Sorting or cleansing machines for eggs, fruit and other agricultural produce (not mushrooms, cereal or legumes)
293262	Milking machines
293263	Fodder producing machines and equipment; poultry farming machines and equipment; incubation equipment and heat cupboards for poultry
293264	Machines and equipment for cleaning and sorting cereals or dried legumes
293265	Other machines and equipment for agriculture, horticulture, forestry, poultry farming or beekeeping
293270	Parts for agricultural and forestry machines
293291	Installation services for agricultural and forestry machines
293292	Repair and maintenance services for agricultural and forestry machines

294010	Metalworking machines operated by the use of a laser or like method; work centres and suchlike
294020	Machining lathes, machining tools for reaming and milling
294030	Other metal machining tools
294040	Machines for working stone, wood or suchlike hard materials; Clamps for manufacturing particle board, etc.
294050	Pneumatic or power driven hand tools
294060	Soldering and welding tools, machines and equipment for face hardening and hot spraying
294070	Parts and accessories for machining tools
294091	Installation services for machining tools
294092	Repair and maintenance services for machining tools
295111	Metal processing machines: converters, casting ladles, casting dies and casting machines; metal roller mills
295112	Parts for metal processing machines; metal roller mill parts
295191	Installation services for metal processing machines
295192	Repair and maintenance services for metal processing machines
295210	Mining machines
295220	Earthmoving and digging machines and equipment, self-powered, and parts thereof (bulldozer blades)
295230	Other digging machines and equipment (pile drivers, snowploughs and snowmaking machines, cable counters, etc.)
295240	Machines and equipment for sorting, crushing or mixing soils, stones, ores and suchlike; machines for manufacturing formwork
295250	Endless-track tractors
295260	Parts for quarrying and construction machines and equipment
295291	Installation services for quarrying and construction machines and equipment
295292	Repair and maintenance services for quarrying and construction machines and equipment
295311	Centrifuges, cream separators
295312	Dairy machines and equipment
295313	Machines and equipment used to grind and process cereals and dried legumes, n.e.c.
295314	Machines and equipment used in manufacturing wine, cider, fruit juices and suchlike beverages
295315	Baking ovens, not operated by electric power; drying machines and equipment for agricultural produce; cooking and heating equipment for other than household use
295316	Machines and equipment used in manufacturing foods and beverages, also fats and oils for industrial manufacturing, n.e.c.
295320	Parts for machines used in the foodstuffs, beverage and tobacco industries
295391	Installation services for machines used in the foodstuffs, beverage and tobacco industries
295392	Repair and maintenance services for machines used in the foodstuffs, beverage and tobacco industries
295410	Machines for preparing, spinning, knitting and crocheting fabrics
295421	Machines and equipment used to wash, iron, dye etc. yarns and fabrics
295422	Laundry type washing machines; machines for chemical cleaning; drying machines, with a drying capacity of >10 kg
295423	Sewing machines, other than stitching and domestic sewing machines
295430	Machines and equipment used to process animal hides and skins or in the manufacture and repair of footwear and suchlike
295440	Parts and accessories for machines for the textile, apparel and leather industries
295450	Domestic type sewing machines
295491	Installation services for machines and equipment used in the textile, apparel and leather industries
295492	Repair and maintenance services for machines used in the textile, apparel and leather industries
295511	Machines used in manufacturing paper, board and paperboard, excl. parts thereof

295512	Parts for machines used in manufacturing paper, board and paperboard
295591	Installation services for machines used in manufacturing paper, board and paperboard
295592	Repair and maintenance services for machines used in manufacturing paper, board and paperboard
295610	Printing and bookbinding machines and parts thereof
295621	Clothes drying lines
295622	Machines and equipment for drying wood, paper pulp, paper, board or paperboard
295623	Machines and equipment for working rubber and plastic or manufacturing rubber and plastic goods
295624	Moulds; moulding frames for metal casting; model patterns; casting models
295625	Other specialised machines, n.e.c.
295626	Parts for other industrial specialised machines
295691	Installation services for other industrial specialised machines, n.e.c
295692	Repair and maintenance services for other industrial specialised machines, n.e.c
296011	Motorised tanks and other armour-plated combat vehicles and parts thereof
296012	Weapons of war, excl. revolvers, pistols, swords or suchlike weapons
296013	Revolvers, pistols, other firearms and suchlike goods; other weapons
296014	Bombs, missiles and suchlike munitions; cartridges, other ammunition and projectiles; parts
296015	Parts of weapons of war and other weapons
296090	Installation, repair and maintenance services for weapons and weapon systems
297110	Refrigerators and freezers; washing machines; electric blankets; fans, of a domestic type
297121	Electro-mechanical household appliances with built-in electric motors
297122	Shaving machines, hair removal appliances and haircutting machines with built-in electric motors
297123	Electric heating appliances for treating hair and drying hands; electric irons
297124	Other electric heating appliances
297125	Water heating appliances, hot water storage appliances and heating elements, electrically operated
297126	Electric heating equipment for habitable rooms and corresponding spaces and subsoil electrical heating appliances
297127	Microwave ovens
297128	Other ovens; stoves, heating plates, heating rings, grills, toasters
297129	Electrical heating resistors
297130	Parts for electrically powered domestic appliances
297210	Cooking and heating appliances for domestic use, not electrically powered
297220	Parts for ovens, ranges and suchlike domestic appliances, not electrically powered
300110	Typewriters, data processing equipment and calculating machines and parts thereof
300121	Copiers and heat transfer copiers
300123	Other office machines and equipment
300124	Parts and accessories for office machines and equipment
300190	Installation services for office machines
300210	Computers; parts and accessories
300290	Installation services for computers and other data processing equipment
311010	Electric motors with an output of not more than 37.5 W; other direct current motors; direct current generators
311020	Universal current motors with an output of more than 37.5 W; other alternating current motors and generators
311030	Electrical generator combinations and rotary electric converters
311040	Electrical transformers
311050	Compressors for discharge bulbs; static converters; other inductors
311060	Parts for electric motors, generators and transformers
311091	Installation services for electric motors, generators and transformers
311092	Repair and maintenance services for electric motors, generators and transformers
312010	Electrical equipment for switching and protecting electrical circuits rated > 1 000 volts

312020	Electrical equipment for switching and protecting electrical circuits rated < 1 000 volts
312030	Electrical distribution boards
312040	Parts for electrical distribution and monitoring equipment
312091	Installation services for electrical distribution and monitoring equipment
312092	Repair and maintenance services for electrical distribution and monitoring equipment
313010	Insulated conductors and cables; optical fibre cables
314010	Galvanised accumulators and batteries and parts thereof
314020	Electrical batteries and parts thereof
315010	Incandescent bulbs and discharge bulbs; arc lamps
315020	Light fittings and lighting accessories
315030	Other light fittings and lighting accessories
315040	parts for light fittings and lighting accessories
316100	Electrical equipment for electric motors and vehicles, n.e.c.
316210	Other electrical equipment, n.e.c.
316290	Installation, repair and maintenance services for other electrical equipment, n.e.c.
321010	Electrical condensers
321020	Electrical resistors, not heating resistors
321030	Printed circuits
321040	Electronic tubes (hot cathode, cold cathode and photocathode tubes), also cathode ray tubes
321050	Diodes and transistors
321060	Electronic integrated circuits and microcircuits
321070	Parts for electronic tubes and other electronic components
322011	Two-way radio, telegraph, radio and television transmitters
322012	Television cameras
322020	Electrical equipment for wireless speech or wireless telegraphy; videophones
322030	Parts for electrically operated telephone or transmitting equipment
322090	Installation, repair and maintenance services for television and radio transmitters and equipment for wireless speech or wireless telegraphy
323010	Radio receivers
323020	Television receivers
323031	Record players, cassette players and other sound reproduction equipment
323032	Magnetic recorders and other audio recording equipment
323033	Visual recording or reproducing equipment; camcorders
323040	Microphones, loudspeakers, receivers for two-way radios and radio telegraphy
323051	Parts and accessories for sound reproduction and video equipment
323052	Miscellaneous antenna and reflectors and parts thereof; parts for radio receivers and radio telegraphy; radar equipment, parts
323090	Manufacturing and processing services, installation, repair and maintenance services, for radio and television equipment in professional use and for audio and visual recording and reproduction equipment
331010	Medical instruments and surgical appliances, orthopaedic appliances and parts thereof
331020	Operating room furniture, surgical furniture, dental and veterinary furniture; barber's chairs and suchlike chairs and parts thereof
331090	Repair and maintenance services for medical and surgical appliances and equipment
332010	Navigational, meteorological, geophysical and suchlike instruments and equipment
332020	Radar equipment, radio navigation equipment and remote radio control equipment
332030	Precision scales; drawing and calculating instruments, linear measuring instruments and suchlike
332040	Instruments for measuring electrical and ionising radiation quantities
332050	Instruments for measuring other physical properties
332060	Other instruments and equipment for measuring, checking and testing (microscopes, electric meters, etc.)
332070	Thermostats, manostats and other automatic control and monitoring instruments and equipment

332080	Parts for instruments and equipment for measuring, checking and testing and instruments and equipment used in navigation, etc.
332090	Installation, repair and maintenance services for instruments and equipment for measuring, checking and testing and instruments and equipment used in navigation
333010	Design and assembly services for industrial process control equipment, also automatic production plants
334010	Spectacles, lenses and parts thereof
334020	Other optical instruments and parts thereof
334030	Photographic equipment and parts thereof
334090	Repair and maintenance services for photographic, film and optical instruments in professional use
335010	Clocks and watches, excl. mechanisms and parts
335020	Clock and watch mechanisms and parts
335090	Installation, repair and maintenance services for time measurement instruments and equipment in industrial use
341010	Combustion engines used in motor vehicles motorcycles
341020	Motor cars
341025	Motor vehicles, used
341030	Motor vehicles for transporting > 10 persons
341041	Motor vehicles for transporting goods with a compression ignition, piston-driven engine (diesel or semi-diesel), new
341042	Motor vehicles for transporting goods with a spark ignition, piston-driven engine; other goods vehicles, new
341043	Motor vehicles for transporting goods, used
341044	Articulated tractor-trailers, for road transport
341045	Chassis, engine equipment, for motor vehicles
341050	Specialised motor vehicles
341099	Manufacturing and processing services for motor cars and trailers and parts thereof
342010	Motor vehicle bodies
342021	Containers, specially designed for transport in one or more ways
342022	Caravans and semi-trailers for dwelling or camping purposes
342023	Other caravans and semi-trailers
342030	Parts of caravans, semi-trailers and other transport equipment, not mechanically propelled
343010	Engine parts
343020	Other parts and equipment for motor vehicles, n.e.c.
343030	Safety belts and vehicle body parts and equipment
351110	Naval vessels
351121	Cruisers, ferries and suchlike for human transport
351122	Tankers
351124	Other vessels for the transport of goods
351131	Fishing vessels
351132	Tugs and pusher tugs
351133	Dredging boats; lightships, sprayer vessels, floating cranes; other vessels (icebreakers)
351140	Floating and immersed drilling or production platforms
351150	Other floating structures
351160	Scrap vessels and other floating structures
351191	Repair and maintenance services for ships and floating rafts and structures
351192	Vessel overhaul
351198	Electrical and HIVAC installation on board ships, boats and floating structures
351199	Manufacturing and processing services for ships, boats and floating structures
351210	Pleasure and sports craft
351290	Repair and maintenance services for pleasure craft and sporting craft
352010	Railway engines and tenders
352020	Self-propelled rolling stock and trams, excl. maintenance or service carriages
352030	Other rail traffic vehicles

352040	Parts of railway engines and trams or other rolling stock; accessories and fitted equipment and parts thereof; mechanical traffic monitoring and control equipment
352090	Repair, maintenance and overhaul services for railway engines and trams or other rolling stock
353010	Aircraft engines; air traffic control equipment, land based equipment for flight training, parts
353020	Balloons and dirigibles; gliders and gliding machines; hang gliders and other non-mechanised aircraft
353030	Helicopters and aircraft
353050	Other parts of aircraft and spacecraft
353090	Repair, maintenance and overhaul services for aircraft and aircraft engines; assembly thereof
354110	Motorcycles and sidecars
354120	Parts and equipment for motorcycles and sidecars
354210	Bicycles and other cycles, non-motorised
354220	Parts and equipment for bicycles and other cycles
354310	Means of conveyance for invalids and parts thereof
355010	Other vehicles, n.e.c.
361111	Seats, mainly metal framed (aircraft, motor vehicle, theatre and suchlike)
361112	Seats, mainly wood framed (armchairs, sofas, plastic chairs and suchlike)
361114	Parts of chairs
361210	Other office and retail furniture
361310	Kitchen cabinetry and furniture
361410	Other furniture and parts
361420	Finishing services for furniture (excl. upholstering of chairs and seats)
361510	Sprung mattresses; mattresses
362110	Coins
362210	Jewellery and other goldsmith products
363010	Musical instruments and parts thereof
363090	Repair and maintenance of musical instruments
364011	Skis, ice skates and roller skates; water sports equipment; parts thereof
364013	Gymnastics and exercise equipment and accessories
364014	Other equipment for sports or outdoor games; swimming pools and wading pools
364015	Lures, other fishing accessories; hunting and fishing equipment n.e.c.
365000	Games and toys
366110	Fake jewellery
366211	Brooms and brushes used for household cleaning purposes
366212	Toothbrushes, hairbrushes and other toilet brushes for personal use; artist's brushes and writing brushes, and brushes for cosmetic products; other brushes
366213	Other brushes (paint rollers; brushes as parts of machines, equipment or vehicles, etc.)
366310	Merry-go-rounds, swings, shooting gallery and other amusement park equipment
366320	Writing instruments
366331	Umbrellas and sun umbrellas; walking canes etc.; parts thereof
366333	Fasteners and parts thereof; buttons, zips
366340	Linoleum
366350	Products made from hair or animal hair; similar products manufactures from textile fabrics
366360	Cigarette lighters, pipes and parts thereof; safety matches; lighter fuels and liquefied gaseous fuels for the above
366371	Festival, carnival and other pleasure articles, incl. melted tin fortune-telling and practical joke stuff
366372	Baby carriages and parts thereof
366373	Combs, hair slides and suchlike articles; hairpins, etc.
366374	Props, equipment and models for presentation purposes
366375	Stearine, paraffin and wax candles and suchlike goods

366376	Artificial flowers, leaves and fruit and parts thereof
366377	Other miscellaneous goods, n.e.c.
366390	Other manufacturing and processing services related to production
371010	Secondary raw materials, metallic
372010	Secondary raw materials, other than metallic
401010	Electric power
401020	Fuel rods (radiated) used in nuclear reactors
401030	Electric power distribution services
402010	Carbon gas, water gas, generator gas and suchlike gases, not crude oil gases
402020	Distribution services for gaseous fuel in a pipe network
403010	Distribution services for steam and hot water
403020	Heat energy
410010	Water
410020	Water distribution services
450110	Residential buildings, newly constructed
450120	Residential buildings, refurbishment
450130	Residential buildings, annual repairs
450140	Other buildings, newly constructed
450150	Other buildings, Other buildings
450160	Other buildings, annual repairs
450210	Civil engineering
450220	Civil engineering, repairs
450900	Construction services
501000	Sales of motor vehicles
502000	Service and repair of motor vehicles
503000	Sales of motor vehicle parts and equipment
504000	Sales of motorcycle parts and equipment
505000	Retail sales of fuels
511000	Services of agencies
512000	Wholesale services
521000	Retail sale services
527000	Repair services for domestic appliances
528000	Packaging recycling services
551000	Hotel services
552000	Services for youth hostels, camping areas and holiday villages
553000	Serving of food
554000	Serving of beverages
555110	Staff canteen and institutional canteen services
555200	Meals services
601010	Passenger transport by railway
601020	Freight transport by railway
602110	Tram and metro transport
602120	Bus transport
602200	Taxi transport services
602300	Other land based passenger transport services (charter travel, sand suchlike)
602400	Road transport freight services
603000	Piped transportation services
611000	Passenger transport by sea and inland waterway
612000	Freight transport by sea and inland waterway
613000	Time charter
621000	Passenger transport by air
622000	Freight transport by air
630100	Rail maintenance
630200	Road maintenance
631100	Loading and unloading

631200	Storage
632100	Other land transport ancillary services
632200	Other water transport ancillary services
632300	Other air transport ancillary services
633000	Services of travel agencies and travel organisers
634000	Other transport mediation services
641100	Postal services
641200	Other distribution and courier services
642010	Data and word processing services
642020	Other telecommunications services
642030	Radio and television services by cable
650001	Indirect financial services
650002	Value-added tax financial services (notary and safekeeping services, debt collection)
651110	Central bank services
651210	Other banking services
652110	Financial leasing services
652210	Other credit extension services
652310	Other financial mediation services, n.e.c., excl. insurance services
660110	Life assurance services
660210	Retirement pension services
660310	Motor vehicle insurance
660320	Credit and guarantee insurance services
660330	Other insurance services
660340	Reinsurance services
671110	Financial mediation management support services
671210	Sales and management of securities
671310	Other financial and investment ancillary services, n.e.c.
672110	Insurance underwriting and management services
672210	Other services ancillary to insurance
701000	Development and sales of real estate
702100	Ownership and letting of dwellings services
702200	Rental and management of real estate
703100	Real estate agencies
703200	Management of real estate on a fee or contract basis
711000	Motor rental services
712100	Other rental services of equipment for transport by land
712200	Rental services of equipment for transport by sea and inland waterway
712300	Rental services of equipment for transport by air
713100	Rental services of agricultural machines and equipment
713200	Rental services of construction machines and equipment
713300	Rental services of office machines and equipment, and computers
713400	Rental services of equipment of other machines and equipment, n.e.c.
714000	Rental services of equipment of personal articles and domestic goods
721000	Consulting services related to EDP equipment
722010	Data processing equipment, storage
722020	Software design, manufacture and consulting services
723000	Data processing services
724000	Data base services
725000	Repair and service of office and computers
726000	Other services ancillary to computers
731000	Research and development services in the natural sciences and technology
732000	Research and development services in social science and the humanities
741100	Legal services
741200	Accounting services, bookkeeping and auditing services; tax advising services
741300	Marketing and polling services

741400 Business management consulting services
741500 Management company services
742010 Community planning
742020 Civil engineering technical services
742030 Architectural services
742040 Construction design services
742050 HVAC design services
742060 Electrical engineering design services
742070 Other construction design services
742080 Machine and process engineering services
742090 Other technical services
743000 Technical testing and analysis services
744000 Advertising services
745000 Manpower and personnel services
746000 Detective, protection and security services
747000 Cleaning services
748110 Photographer's services
748120 Photographic film development services
748200 Packaging services
748310 Office work and translation services
748320 Address registry and posting services
748410 Licences, patents and royalties
748490 Other business services
751100 General government services
751200 Health care, education, culture and other social service management services
751300 Administrative services ancillary to business life
751400 General government ancillary services
752100 Foreign Ministry administrative services
752200 Defence forces services (defence force materiel, conscripts)
752300 Legal act services
752400 Services related to public security, compliance with the law and public order
752500 Fire and rescue services
753100 Employee pension insurance
753200 Other statutory social security
800010 Educational services
804110 Driving tuition services
851110 Hospital services
851210 Physician services
851310 Dental care services
851410 Other health care services
852010 Veterinary services
853100 Social services
900010 Drainage and waste water services
900020 Refuse collection services
900030 Public sanitation and suchlike services
911000 Business life, employer and employee union services
912000 Trade union services
913100 Religious organisation services
913200 Other organisation services
921100 Film and videotape production services
921200 Film and videotape dissemination services
921300 Film presentation services
922010 Radio and television services
923010 Artistic and literary creation and interpretation services
923200 Art institution services
923310 Amusement park services

923410	Other entertainment services
924010	News agency services
925110	Library and archive services
925210	Museum services and preservation services for historical buildings
925310	Services for botanical gardens, zoological gardens and nature parks
926110	Maintenance services for athletic fields, sports halls and stadiums
926210	Other sports related services
927110	Gambling and betting services
927210	Other entertainment services
930100	Laundry services
930200	Hairdressing and other beautician services
930300	Undertaking services
930400	Spas and suchlike services
930500	Other services, n.e.c.
950010	Domestic services
990010	Services for international organisations and foreign missions
999110	Foodstuffs and beverages
999120	Office supplies
999130	Travel expenditure
999140	Work clothes
999150	Transport and storage
999160	Business hospitality expenses
999170	Post and banking services
999180	Repair and installation services
999190	Work for remuneration
999200	Other expert services
999210	Miscellaneous products
999220	Stamp duty, asset transfer tax (cost of transfer of ownership of land and suchlike)
999230	Purchases by Finnish households in the rest of the world
999240	Purchases by visiting households in Finland
999310	Adjusting item for department store
999320	C.I.F./F.O.B adjustment, insurance and freight income
999400	Virtual product

Appendix 2

**CLASSIFICATIONS FOR THE FINANCIAL
STATISTICS OF MUNICIPALITIES AND JOINT
MUNICIPAL AUTHORITIES
TABLE 01 (OPERATING BUDGET) AND
TABLE 02 (INVESTMENTS)**

(from 2000)

**CLASSIFICATION OF FUNCTIONS TO BE USED IN COMPILING
STATISTICS OF MUNICIPALITIES AND JOINT MUNICIPAL
AUTHORITIES**

Operating budget (Table 01) and investments (Table 02):

	Statistical code
GENERAL ADMINISTRATION	110
SOCIAL WELFARE AND HEALTH	
Administration of social welfare and health	201
Children's day nursery care	204
Other children's day care	206
Pre-school (Social services)	208
Institutional care of children and young people	210
Other services for children and families	215
Institutional services for the elderly	220
Institutional services for care of the disabled	225
Sheltered work and activities for the mentally retarded	230
Home services	235
Other services for the elderly and disabled	240
Social work with intoxicant abusers	245
Basic health care (except dental care)	252
Investments: Basic health care	250
Basic health care dental care	254
Specialised nursing	260
Environmental health care	270
Other social welfare and health	290
EDUCATION AND CULTURAL ACTIVITIES	
Administration of education and cultural activities	301

Comprehensive schools	305
Upper secondary schools	310
Vocational institutions	315
Polytechnics	320
Adult education centres	325
Other optional educational work	327
Basic art education	335
Other educational work	345
Libraries	350
Physical education and outdoors	355
Youth work	360
Museums, theatres and orchestras	377
General cultural activities	390
OTHER SERVICES	
Community planning	410
Building inspection	420
Environmental management	440
Transport facilities	460
Parks and civic areas	470
Fire and rescue operations	480
Administration of justice and security	515
Holiday substitute services	520
Office space and rental services	535
Internal services	545
Business promotion	555
Water supply	610
Energy supply	620
Waste disposal	625
Mass transit	630
Harbours	640
Agricultural holdings, including forests	660
Other business related activities	669
Other activities	690
<i>OPERATING BUDGET, TOTAL</i>	<i>700</i>

CLASSIFICATION OF INCOME AND EXPENDITURE

Table 01 Operating budget

TYPE OF EXPENDITURE	Statistical code
EXPENDITURE	
Wages and salaries	0100
Pensions	0300

Retirement pension contributions	370
Other social contributions	380
Purchases of client services	0500
- <i>from central government</i>	0510
- <i>from municipalities</i>	0520
- <i>from joint municipal authorities</i>	0530
- <i>from others</i>	0540
Purchases of other services	0600
Materials, supplies & goods (incl. inventory additions/reductions)	1400
Subsidies	1800
Rent expenditure, external	1920
Rent expenditure, internal	1970
Other expenditure	2700
 <i>EXPENDITURE ON ACTIVITIES, TOTAL</i>	 2900
 Of which: Internal expenditure, total	 2910
 Write-offs and depreciation	 2920
 IMPUTED EXPENDITURE	
 Roll-over items	 2960
Value-added tax in accordance with reimbursement system	2965
Other imputed expenditure	2970
 TYPE OF INCOME	
 INCOME	
 Sales income	 5200
- <i>from central government</i>	5210
- <i>from municipalities</i>	5220
- <i>from joint municipal authorities</i>	5230
- <i>from others</i>	5240
- <i>internal sales income</i>	5250
Payments	5500
Grants and subsidies	5800
- <i>employment grants</i>	5805
- <i>other grants and subsidies from central government</i>	5810
- <i>from the European Union</i>	5880
- <i>from others</i>	5890
Rental income, external	6320
Rental income, internal	6370
Other income	6700

Change in stocks of finished goods	6840
Own-account production	6850
<i>INCOME ON ACTIVITIES, TOTAL</i>	6900
Of which: Internal income, total	6910
IMPUTED INCOME:	
Roll-over items	6960
Other imputed items	6970

Table 02 Investments

INVESTMENT EXPENDITURE

Acquisitions of fixed assets:

Intangible goods	3100
Land and water assets	3310
Dwellings	3320
Non-residential buildings	3330
Fixed structures and equipment	3340
Transport equipment	3350
Other machinery and equipment	3360
Other tangible goods	3390
Fixed assets securities	3400

INVESTMENT EXPENDITURE, TOTAL 4900

IMPUTED EXPENDITURE

Value-added tax in accordance with reimbursement system	4965
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INVESTMENT INCOME

Funding portions for investment expenditure: 7100

- from central government	7110
- from municipalities and joint municipal authorities	7120
- from the European Union	7150
- from others	7190

Sales of fixed assets: 8000

Intangible goods	8100
Land and water assets	8310
Dwellings	8320
Non-residential buildings	8330
Fixed structures and equipment	8340
Transport equipment	8350
Other machinery and equipment	8360
Other tangible goods	8390
Fixed assets securities	8400

INVESTMENT INCOME, TOTAL

9900