

FINLAND

REGIONAL GVA INVENTORY 2005

4TH APRIL 2008

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1. SUMMARY

The regional GVA inventory of the Finnish Regional Accounts contains the sources and methods used for the compilation of the statistical year 2005. Eurostat has defined the structure and contents of the inventory in co-ordination with the member states of the European Union. It's purpose is to improve the transparency and comparability of the calculations. Eurostat recommends producing similar inventories in other European Union member states.

Finland's economic territory comprises Finland's geographic area in accordance with the boundaries of the State (including the Åland Islands) but excludes the premises of foreign embassies and consulates as well as supranational and international organisations on Finnish territory.

Territorial enclaves in the rest of the world (embassies, consulates, research stations, etc.) are counted as part of Finland's economic territory. National air space and territorial waters, vessels, aircraft and other movable equipment owned by hauliers domiciled in Finland are also considered as parts of this territory.

1.1. Organisation of the Statistical Process for Compiling Regional GVA

Finland's Regional Accounts are compiled in their entirety at Statistics Finland. Regional Accounts belong to the Economic Statistics Department, which is responsible for macroeconomic statistics. The Department is divided into three statistics units and Regional Accounts forms a part of Regional Economic Statistics, where also Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards among others are produced.

The National Accounts unit is responsible for compiling the annual accounts and revising the accounting system. The Financial Statistics unit is responsible for Financial Accounts and calculating general government finances in the National Accounts, as well as for insurance and financial institutions. The organisation bounds are more or less administrative and these do not affect on daily work.

Table 1: Organisation and tasks of the Economics Statistics Department (number of staff in brackets)

Management (7) including co-ordinating of National Accounts		
National Accounts	Financial Statistics	Regional Economic Statistics
- Annual National Accounts - Quarterly Accounts - Monthly Indicator of Total Output	- Financial Accounts - EMU debt - Quarterly Financial and Non-	- Regional Accounts - Value added tax base calculations - Regional Input-Output tables

<ul style="list-style-type: none"> - Supply and Use tables - Capital Stock - Historical Series - Input-Output - Productivity Research - Development of Balance Sheets - Consumer Survey - Statistics on the Finances of Agricultural and Forestry Enterprises - Income and Tax Statistics on Agriculture and Forestry (EU) 	<ul style="list-style-type: none"> Financial Accounts of General Government - Financial Institutions' Calculations of National Accounts - Credit Stock Statistics - Financial Statement Statistics on Financial Institutions - Interest Payment Statistics - Deposit Statistics - Other Financial Market Statistics - Co-ordination of Authority Data Collection - Finances and Activities of Municipalities and Joint Municipal Boards 	<ul style="list-style-type: none"> - Central Government Revenue and Expenditure by Region - Public Financing of Entrepreneurial Activities - Productivity of Non-Market Services - Regional Indicators - Quarterly Statistics of Municipalities - Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards
(29)	(22)	(19)

At the start of 2008, roughly 19 persons were involved in the compilation of National Accounts. Five persons were working full-time on Quarterly Accounts and the Monthly Indicator of Total Output. Some annual accounts compilers also produced quarterly data. In addition, three persons produce and develop the Quarterly Sector Accounts and five persons compile Financial Accounts statistics. There were three compilers and researchers of Regional Accounts who worked about two man-years. At the beginning of 2008, around forty of the more than 70 staff of the Economic Statistics Department were involved in the compilation of National Accounts. The majority of these compilers have been educated at the university degree level.

Regional Accounts source statistics, except for Local government financial statistics, economic statistics of agriculture and financial market statistics, are not compiled at the Economic Statistics Department. Source statistics are produced either by other statistics departments of the organisation or externally. At the end of the year 2007 the staff at Statistics Finland numbered roughly 1,000 persons, which includes approximately 200 statistical interviewers.

One researcher, who is assisted by the Regional Accounts team, is mainly responsible for compiling Regional Accounts. Production, employment and investment data are published beside Regional Accounts of Production and Employment. The preliminary data for year t are ready at $t + 15$ months. The final data are released one year later at t

+ 27 months. Major revisions are implemented at the same time as in National Accounts. Possible minor revisions in the time series are carried out and published in each compilation round.

1.2. Overview of the Methodology of Regional GVA Compilation

Regional GVA is calculated primarily according to the production approach. In some cases the income approach is also used. Gross value added at basic prices is equal to the total of gross value added by industry. Regional gross value added equals regional output at basic prices minus regional intermediate consumption. When taxes on products are added to and subsidies of products are deducted from gross value added at basic prices, gross value added at market prices, or GDP, is obtained.

1.2.1. Statistical Unit

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

1.2.2. Classifications

Classifications of regions, sectors, industries, transactions, prices and methods define the essential data content of Regional Accounts. Classification of producers by type and product are also used. All classifications can be found in the Annex.

Classification of regions

The Nomenclature of Territorial Units for Statistics (NUTS) is a hierarchical classification of regions established by Eurostat. The Member Countries of the EU are divided into NUTS 1 level regions and further into NUTS 2 and NUTS 3 levels. In addition, Finland's Regional Accounts uses national regional classifications, which include the Population Register Centre's municipality classification and the national sub-regional unit classification. These correspond to LAU 1 and LAU 2 levels. Data are compiled primarily in accordance with the last statistical year and at the LAU 2 level (municipality level).

Classification of transactions

Regional Accounts uses the classification of transactions defined in ESA 95. A similar classification is used also in National Accounts. The data content of Regional Accounts is narrower than in Annual Accounts so there are also fewer transactions. On the other hand, the classification of transactions is broader than that required in the ESA questionnaire.

Classification of industries

Regional Accounts total 98 industries at the most detailed accounting level.

Classification of sectors

The classification of institutional sectors is the basic classification used in Regional Accounts. The classification is similar to that used in National Accounts. In 2005, Regional Accounts were compiled at the level of 185 sector/industry -compilations.

Classification of prices

Regional Accounts are compiled in accordance with three price concepts. A transaction can be expressed either at current prices, at previous year's prices or at reference year 2000 prices.

Regional Accounts show all monetary flows and stocks valued either at basic prices, market prices or purchasers' prices.

Classification of methods

Classification of methods is the system which shows the quality level of regional methods. These include:

1. Bottom-up
2. Pseudo bottom-up
3. Industry desegregation
4. Top-down

The bottom-up method means that all (or almost all) information is available at the establishment level. When using the pseudo bottom-up method, most of the data or all data have to be divided from companies to establishments.

The industry desegregation method means that the transactions of National Accounts are divided to establishments relative to, for example, turnover or employment. In the top-down method the transactions of the industry are estimated with the indicator which should correlate in the best possible way with the described phenomenon.

This classification of methods is somewhat different from the usual method classification. Normally there are three methods, but this four-tier classification was developed because it is more analytical and easier to describe.

Classification of producers by type

Classifications of producers by type are used in some cases to specify industry information if the aim is to regionalise the activity of different producers separately. The main producers are market producers and non-market producers, which include producers for own final use and other non-market producers.

Classification of products

The product classification is utilised in calculating GDP, which is based on the Regional Supply and Use tables of 2002.

1.2.3. Reference Framework

Regional GVA is calculated primarily according to the production approach. In practise this means that at first the output at basic prices is calculated for each industry/sector/municipality level, from which similar intermediate consumption is then deducted. Intermediate consumption includes both financial intermediation services indirectly measured (FISIM) and other intermediate consumption. Hence, gross value added (GVA) at basic prices is obtained.

Regional GVA can be expressed as:

$$\begin{aligned} & \text{Output at basic prices} \\ & - (\text{Financial intermediation services indirectly measured} \\ & + \text{Other intermediate consumption}) \\ & = \text{Gross value added at basic prices} \end{aligned}$$

Transactions at current prices are converted to fixed prices with annual deflators at the most detailed level of calculation. Output, FISIM and other intermediate consumption are deflated separately for each industry/sector level.

Regional Accounts have produced Regional Input-Output tables and Supply and Use tables twice so far. The first study was published in 2000 for the year 1995. The latter study was published in October 2006 for the year 2002. There were a total of 95 industries at the most detailed accounting level. The results were published at the level of 30 industries.

In the balancing process of the national input-output table, almost 950 commodities were distinguished. The final balancing was made for 144 commodities. The results were published at the level of 30 commodities.

The Regional Input-Output study covers following tables:

- Supply and use at basic prices
- Use table for both foreign and domestic imports at basic prices
- Input-output at basic prices
- Input coefficients
- Inverse matrix
- Components of price for output
- Labour input and labour input coefficients

The results of the latest regional input-output study have been used in estimating the taxes and subsidies on products.

1.3. Main Sources Used for the Compilation of Regional GVA

The main sources of the production approach in the Non-financial corporations' (S111) and Households (S14) sectors are the Business Register and Structural business statistics. In addition, several other industry-based sources are used.

The general government sector's main sources are Financial Statement and Report Data of Central Government and Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards.

The compilation of Finland's regional GVA is not based on survey or census data. Therefore, it is not necessary to apply the treatment of non-response. All sources are produced either at the unit level or the regional level.

Table 2. The contribution of main sources to regional output and intermediate consumption

Source	Output at basic prices, EUR million	Intermediate consumption at purchasers' prices, EUR million	Output at basic prices, the share of the output in National Accounts	Intermediate consumption at purchasers' prices, the share of the output in National Accounts
Structural Business Statistics	215 094	127 680	72,8	80,3
Business Register + Structural Business Statistics	17 244	6 867	5,8	4,3
Financial Statement and Report Data of Central Government	10 482	4 955	3,6	3,1
Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards	27 232	9 131	9,2	5,8
Statistics on the Finances of Agricultural and Forestry Enterprises	3 524	2 438	1,2	1,5
Dwelling Stock and Rent Statistics	17 723	5 323	6,0	3,4
Other sources	4 235	2 545	1,4	1,6
TOTAL	295 534	158 939	100	100

1.3.1. *Business Register*

Finland's Business Register covers all enterprises, self-employed persons and non-profit corporations in the capacity of employers, included in the Value Added Tax (VAT) Payment Register or the PAYE Register (pay-as-you-earn / Employee's Advance Tax Declaration Register). The register does not include farms so far. Data are collected either from administrative sources or with the Business Register's own enquiries. Central and local administrative units are included in a separate database.

The key variables are employees, self-employed persons, turnover and salaries paid. Data are classified by industry, location of activity, type of owner and legal form. Statistics include enterprises whose period of activity is more than six months during 2005. In addition, the enterprise has to employ over one-half of a person or its turnover has to exceed EUR 9,187 in 2005. This also applies to establishments. In addition, the Business Register runs a separate database every year which includes establishments outside the Business Register's actual description area.

1.3.2. *Structural Business Statistics*

Structural Business Statistics are the main source of Regional Accounts.

Enterprise database

The enterprise database contains the combined data applying to enterprises and covers the Business Register, the business tax register and direct survey data. The aggregate data contain exhaustive data on nearly all enterprises in every industry. The statistical unit is the independent enterprise. The material does not cover corporate groups or establishments. New forms of central government and local authority bodies are included. General government agencies and non-profit bodies are not covered by its scope.

The material contains profit and loss statement 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 on enterprises included 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 come under 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. As a rule, classification data on businesses are collected from Statistics Finland's Business Register. In 2005 the data cover approximately 240,000 enterprises and 430 variables.

The enterprise database is used mostly by Regional Accounts in compiling data on primary production.

Establishment database for manufacturing

The annual structural business statistics for manufacturing are what is termed a total survey. In 2005 the target population consists of some 29,000 establishments. The data are prepared for each unit of the target population. They are obtained either directly from the enterprise (questionnaire form) or generated from registers. Only 14% of manufacturing establishments are part of the survey (termed a direct questionnaire sample). The sample covers roughly 92% of the production value and 84% of the staff. Data on enterprises/establishments not surveyed are based on administrative registers: the direct business income tax register (EVR) supplied by the National Board of Taxes and Statistics Finland's Business Register.

The former contains data on the profit and loss statements, balance sheets and fixed assets of all companies subject to taxation. The latter is a basic register of individuals or units engaged in economic activity, i.e. registered employers, those subject to value-added tax and those registered into a prescribed payments system. The data are used for manufacturing statistics of businesses not included in the direct inquiry. For enterprises excluded from the questionnaire inquiry, profit and loss account and balance data and some other items of data are derived from the business income tax register (EVR). Because the contents of the administrative data are not as exhaustive as those of the direct questionnaire, some of the data (the missing variables) have to be estimated mathematically (imputed).

Enterprises and establishments in manufacturing with a staff of 20 or more are within the remit of direct data collection for financial statement data. The questionnaire form also applies to firms and establishments with less than 20 staff, if the activities and investment levels are on a par with those in the direct questionnaire. Included are also 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 are also included in the questionnaire.

The establishment database contains information about establishments' employees, hours worked, wages and salaries, social insurance, profit and loss account (as far as the operating margin), specification of profit and loss, current assets, tangible fixed assets, imports, exports and gross value and value added of production.

In addition, it contains classification information about the location and activities of the establishment. The establishment database's main units are the enterprise and the establishment. In Regional Accounts, the establishment is the main unit.

The establishment database is the main source when compiling the transactions of industry. In addition, establishments excluded from the establishment database's actual description area are added, which totalled approximately 10 000 establishments in 2005. The contribution of these small establishments to total output was circa 0.3 percent and to total intermediate consumption 1,4 percent.

Establishment database for all activities

The establishment database for all activities is narrower than the establishment database for industry. Its data contain all establishments. In 2005 the database included approximately 400,000 establishments and 70 variables.

The information in service industries is not collected from inquiries but it is based on the model which sources include the establishment database of Business Register and single establishments of the Structural Business Statistics. The establishment database for all activities is the Regional Accounts' main source in service sector estimations.

1.3.3. Financial Statement and Report Data of Central Government

The reforming of central government accounting started on 1 January 1998. The central government accounting office organisation's offices and institutions and its extra-budgetary funds follow the new central government accounting system. The accounting offices are accountable units and also balance their own accounts each year. Financial Statement and Report Data of Central Government are compiled at the State Treasury from the accounting data of accounting offices by eliminating internal profits, expenditure, receivables and liabilities.

Accounting by offices and institutions and central accounting by the State Treasury consist of on-budget accounting and budget accounting. The onus in on-budget accounting is to accurately reflect the actions and financial status of 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. Exceptionally, accruals of tax revenues, financial transactions and subsidies are also 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. The on-budget accounting chart of accounts defines accounting economic activities for all industries. The division into accounting industries is performed by 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. Code keys can not make all the necessary determinations of industries and economic activities. Thus, in addition to automatic adaptations of records, adjustments to industries and economic activities are also performed manually.

In Regional Accounts Financial Statement and Report Data of Central Government is handled like the group of enterprises' financial statements which are regionalised with the help of the establishment database of the Business Register. A single accounting office can be either single or multi-regional.

1.3.4. Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards

These statistics contain data on the revenues and costs, investments, financing, assets, debts and activities of municipalities and joint municipal boards. The basic data of the statistics on the financial statements of municipalities and joint municipal boards are collected by function, income and expenditure item and type of asset and liability.

Starting from the statistical year 1993, the statistics on the finances and activities of municipalities and joint municipal boards contain data on the activities of municipalities' social services and certain other data describing the scope of activity. In addition, the statistics contain some parameter figures describing the number of population, taxation and the finances and activities of municipalities.

The statistics contain all quasi-corporations. The majority of these corporations are excluded from the Local government sector. Instead, they are included in the non-financial corporations sector.

In addition, some activities which are part of the municipalities' budget are excluded. They are considered to be part of the market producers and non-financial corporations. These include, for example, harbours, waterworks, sewerage systems, public transport and power production.

The statistics also include 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).

The adjustments according to National Accounts are made to the unit level data which is used in Regional Accounts.

1.3.5. Dwelling Stock and Rent Statistics

Housing stock statistics reflect the country's aggregate building stock in categories according to purpose of use. Dwellings are classified in statistics according to type of house, year of completion or refurbishment, size and type of dwelling, tenure status, equipment and equipment level, occupancy rate and location. Housing stock statistics are produced each year from data on construction and dwellings maintained by the Population Register Centre.

Rent statistics show rent levels for the entire rental housing stock. They also show the changes in rent levels from the previous year. Rent statistics are compiled annually from inquiries and register surveys in context with the Labour Force Survey. In 2005, the rent statistics framework contained approximately 750,000 dwellings and the data on 187,000 of these were extracted from the Social Insurance Institution's housing allowance register. Estimated rents for the remaining roughly 560,000 dwellings are based on around 15,500 interviews.

The imputed consumption of housing is estimated by merging Dwelling Stock and Rent Statistics at the nearest possible level, in which case the regional dimension is noticed.

1.3.6. Statistics on the Finances of Agricultural and Forestry Enterprises

The statistics on the finances of agricultural and forestry enterprises contain data on the income, expenditure, assets and liabilities, and the change in the fixed assets of farm enterprises. Included is also a description of farm enterprises' forestry activities. Calculations on spouses' combined income liable to state taxation and their taxable assets, which are based on personal taxation data, are also produced for farm enterprises owned by natural persons.

The first reference year of the statistics is 2005. The main sources of data for the statistics are tax data on farm enterprises, the Farm Register and a direct statistical survey aimed at farms.

The statistics replaced the agricultural enterprise and income statistics produced from 1973 to 2004 as well as the agricultural income and tax statistics.

2. RELEASE AND PUBLICATION TIMETABLE, REVISION POLICY AND ACCESS FOR THE PUBLIC

2.1. Timetable for Release and Publication of Provisional and Final Estimates

Production, employment and investment data are published beside Regional Accounts of Production and Employment. The preliminary data for year t are ready at $t + 15$ months (version 1). The final data are released one year later at $t + 27$ months (version 2). Release dates are decided at the end of each year.

The timetable of compiling Regional Accounts of Production and Employment is determined by completions of the main sources. Most of the main sources are completed while compiling the preliminary version of the statistics. There may be some minor updates after the compilation of the preliminary data, and few minor sources become available only while compiling the final data. In addition, National Accounts are final at $t + 24$ months when supply and use tables are balanced.

Below is an example of the production times for versions of the Regional Accounts in 2005 according to current practise.

Version	Month
1	April 2007
2	March 2008

2.2. Policy on Benchmark Revisions

Major revisions are implemented at the same time as in National Accounts. Possible minor revisions in the time series are carried out and published in each compilation round.

There is a version diary of the Regional Accounts for revisions and possible corrections.

2.3. Comparability over Time

Regional Accounts of Production and Employment are comparable in the period 1975 - 2006*. The time series is coherent because, for example, the changes in methods, classifications and sources are estimated off.

The backward revisions are mainly done by chain-linking or recalculating or both methods.

2.4. *Transmission to International Institutions Other than Eurostat*

Regional Accounts do not deliver special transmissions other than Eurostat. On the other hand, if necessary and possible, more specified data are delivered to, for example, research institutes.

2.5. *Accessibility for the Public*

All public information is released on Statistics Finland's web pages. Customers also have the opportunity to order more specified data, if possible.

At present, the web page of the Regional Accounts of Production and Employment contains a total of seven PC-Axis tables and two Excel tables. Data are available at the NUTS 2, NUTS 3 and LAU 1 levels. Production and investment data are released at current prices and at fixed prices. In addition, the transactions and employment by industries and regions are released at reference year 2000 prices.

NUTS 2 and NUTS 3 data are released at the industry level of 30 and LAU 2 data are released at the level of 20. All transactions are released at the level of two sectors; General government and other than General Government.

Released transactions are:

- Output at basic prices
- Intermediate consumption at purchasers' prices
- Value added, gross at basic prices
- Compensation of employees
- Employment
- Self-employed
- Employees
- Total hours worked
- Employees hours worked
- Self-employed hours worked
- Gross fixed capital formation

In addition, there are three tables (NUTS 2, NUTS 3 and LAU 2) in which all industries and sectors are summed up. These tables include the following transactions:

- Output at basic prices
- Intermediate consumption at purchasers' prices
- Financial intermediation services indirectly measured (FISIM)
- Other intermediate consumption

- Value added, gross at basic prices
- Taxes on products
- Subsidies on products
- Gross domestic product, at market prices
- Compensation of employees
- Employment
- Self-employed
- Employees
- Total hours worked
- Employees hours worked
- Self-employed hours worked
- Gross fixed capital formation
- Population

Gross fixed capital formation is released at NUTS 3 level at the level of five industries, four types of investments and two sectors.

The web page of the Regional Accounts of Production and Employment can be found at:

http://tilastokeskus.fi/til/atutyo/index_en.html

The latest press release can be found at (so far only in Finnish):

http://tilastokeskus.fi/til/atutyo/2006/atutyo_2006_2008-03-19_tie_001.html

Indicators of Regional Economy are also released at the same occasion. There are, for example, indexed series, purchasing power parities data and GEP-difference indicator (Gross domestic products, employment and population) available.

The web page of the Indicators of Regional Economy can be found at:

http://tilastokeskus.fi/til/atind/index_en.html

The latest press release can be found at (so far only in Finnish):

http://tilastokeskus.fi/til/atind/2006/atind_2006_2008-03-19_tie_001.html

2.6. Policy for Metadata

The web page of the Regional Accounts of Production and Employment also contain information on metadata. At present the English content contains the description of statistics as well as concepts and definitions. The Finnish content includes also quality descriptions, methodological descriptions and classifications.

Metadata are found under:

- [Description](#)
- [Concepts and definitions](#)

This inventory is also released on our web page.

3. METHODOLOGY FOR THE CALCULATION OF REGIONAL GVA

This Chapter covers the methodological elements of calculating regional GVA. Chapter 3.1 covers methodological elements that apply across all industries.

Chapter 3.2 gives details of methods and sources by industry. Output and intermediate consumption are treated separately for each industry. In addition, Chapter 3.2 is divided into subtitles by industry.

The compilation of Non-financial corporations (S111) and Households (S14) is usually followed through by industry. On the other hand, e.g. General government (S1311, S1313, S13141 and S13149) and Non-profit institutions serving households (S15) are estimated by sector.

Each industry is discussed under each subtitle unless mentioned otherwise. Discussion has been placed under the most suitable industry, if the compilation has been made by sector.

3.1. Principles Applicable to All Industries

Regional GVA is calculated primarily according to the production approach. In some cases the income approach is also used. In practise this means that each industry/sector/municipality combinations' output is estimated at basic prices. After the estimation is completed, intermediate consumption at purchasers' prices is subtracted. Intermediate consumption is divided to FISIM and other intermediate consumption. In this way we can obtain gross value added at basic prices.

Gross value added can be represented as:

$$\begin{aligned} & \text{Output at basic prices} \\ & - (\text{FISIM} + \text{Other intermediate consumption}) \\ & = \text{Gross value added at basic prices} \end{aligned}$$

Data are compiled at LAU 2 level but they are released to the public at NUTS 2, NUTS 3 or LAU 1 level.

The transformation from transactions at current prices to fixed prices is done by National Accounts' deflators at the most detailed compilation level. Output at basic prices, FISIM and other intermediate consumption are deflated separately in each industry/sector combination.

In the case of the bottom-up method differences usually exist between Regional and National Accounts. These differences are due to the simplified method of treatments and possibly the different source statistics used in Regional Accounts. Another reason for the differences is the balancing process of National Accounts.

The regional values have to be adjusted to the national level. Differences between National and Regional Accounts are allocated to regions

relative to the regional values. In some cases the allocation has to be corrected manually.

It is essential to evaluate the coverage, completeness and quality of the source data. The most important valuation criterion is the adjustment value or coefficient, which is the proportion of the sum of all municipality/industry/sector/transaction combinations compared to the corresponding data in National Accounts. If Regional and National Accounts data match completely, the theoretical coefficient is 1.

Normally no special attention is given to the adjustment process. The source data and the methods are explored more carefully with the cooperation of the National Accounts experts only if there are exceptionally high or low adjustment values. Possible changes to the method or source data are also considered. Coefficients do not necessarily need to be near 1, if they are sustainable in the time series.

In any case, the differences need to be explained. For example, the coefficients are unsatisfactory when analysing Central Government (S1311) sector and Road development (6302) industry. This is due to the fact there is not any decent regional estimate for the consumption of fixed capital in the capital intensive industry.

Table 3: An example of the adjustment value analysis in 2005.

The total value received from the Regional Accounts' calculation	Industry	Sector	The total value of National Accounts	Adjustment value or coefficient	Transaction
0,20	16	S111	0	0,00	Output
667,60	17	S111	651	0,98	Output
18,20	17	S14	18	0,99	Output
392,90	18	S111	389	0,99	Output
20,10	18	S14	21	1,04	Output
198,10	19	S111	194	0,98	Output
5,00	19	S14	5	1,00	Output
6 035,20	20	S111	5 786	0,96	Output
50,60	20	S14	48	0,95	Output

After the adjustment value analysis data are tested and analysed with SAS and SuperCross software. The changes between years are reviewed with SAS software and SuperCross software is used to analyse cross tabulating tables at each calculation and aggregate level. Typically data are examined as in a time series.

Possible problems are sorted out with the experts of National Accounts and the source statistics. After this either the methods or the sources have to be corrected.

3.1.1. Available Sources and Information

In Finland major economic statistics are extensive because the sources, such as administrative registers, tax administration data and various surveys, are very extensive.

Finland's Regional Accounts does not use surveys while compiling regional GVA. Hence, we do not need to treat non-response in GVA calculations.

Source statistics are produced either at some unit or at some region level. Finland's Regional Accounts is entitled to use all basic registers at the most detailed level.

3.1.2. Use of Benchmarks and Extrapolations

Benchmarks and extrapolations are not used while compiling regional GVA. NUTS 3 level Regional Supply and Use Tables for the year 2002 are benchmarks for regional taxes on products and subsidies on products, which are used to compile regional GDP.

3.1.3. Treatment of Ancillary Activities

National Accounts does not estimate production at the level of an ancillary establishment. This provides unreliable results in regions. Ancillary activities have to be allocated to the region in which they have their centre of economic interest. In addition, ancillary units' industry is determined by the main activity of the ancillary unit.

In Finland there are two different methods of calculating the GVA of ancillary units.

In manufacturing industries (S111 Non-financial corporations + S14 Households) we have Structural Business Statistics data which are compiled at the local kind of activity unit level. All major LKAU units are included in the survey and there are also tax authority data at company level. These SBS data include also ancillary units, but in many cases the turnover (and other variables) does not represent the real activity of the ancillary unit.

In manufacturing industries output and intermediate consumption are calculated to all LKAUs. After this we check if output and intermediate consumption per employee of the ancillary unit is below average of output and intermediate consumption per employee of this industry at the 5-digit level. Should the figures be below the average they are raised to the average, and if the figures are above the average they are left as they are. Intermediate consumption is corrected only if the corresponding output is corrected, as otherwise the results would be disparate at the ancillary unit level.

This correction relates mostly to the headquarters of manufacturing companies, which in many cases locate in the Helsinki metropolitan

area. In 2005 there were circa 2,400 ancillary units in manufacturing industries, whereas there were circa 39,000 establishments all in all.

On the other hand, in services we also have Structural Business Statistics data, which contain all establishments of all the industries. Data are at the LKAU level but most of the information is compiled with imputation methods (Structural Business Statistics is discussed in the chapter 1.3.2.). Structural Business Statistics gets LKAUs from the Business Register classified according to LKAU (ancillary or not).

Output of ancillary units is considered as output to be used entirely inside the company. Ancillary units' output is estimated relative to their employment. Financial statements of the companies operating in certain industries are used as mirror data. Financial statements are obtained from tax authorities. In Regional Accounts there may be some operating surplus, due to the balance process. In Structural Business Statistics the operating surplus is zero.

Consequently, Regional Accounts does not correct ancillary units because Structural Business Statistics have already calculated it. In 2005 there were 1,300 ancillary units in services, whereas there were a total of 300,000 establishments.

3.1.4. Treatment of Extra-regio

The economic territory of a country can be divided into regional territories and the extra-regio territory. The extra-regio territory is made up of parts of the economic territory of a country, which cannot be attached to a single region.

It consists of the national air-space, territorial waters and the continental shelf lying in international waters over which the country enjoys exclusive rights; territorial enclaves; deposits of oil, natural gas, etc., in international waters, outside the continental shelf of the country, worked by residents units.

Finland's extra-regio territory is very small and it is part of the Central government (S1311). In practise, peacekeeping forces and embassies are part of Finnish extra-regio. These transactions are estimated with the help of Financial Statement and Report data of Central Government.

3.1.5. Approach to Exhaustiveness

The key method to ensure exhaustiveness is to compare and analyse information from a variety of sources. All sources have been gone over with the experts of National Accounts and the main sources.

The main sources in the Non-financial corporations (S111) and Households (S14) sectors are Structural Business Statistics and the Business Register. Financial statement and report data of central government, statistics on the finances and activities of municipalities and joint municipal boards, statistics on the finances of agricultural and

forestry enterprises and dwelling stock and rent statistics are other major sources.

Although the data sources used by Regional Accounts are of high-quality, 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 in National Accounts. 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. The corrections are made especially in construction, trade, transport and hotel and restaurants. In Regional Accounts the hidden economy is allocated relative to other production.

3.1.6. Calculation of FISIM by User Industries

FISIM (financial intermediation services indirectly measured) refers to services produced by financial corporations for which no direct fee is charged. In this situation financial intermediaries provide services for which they charge implicitly by paying or charging different rates to borrowers and lenders. They pay lower rates of interest than would otherwise be the case to those that lend them money and charge higher rates of interest to those who borrow from them. This scheme of interest rates avoids the need to charge their customers individually for services provided and leads to the pattern of interest rates observed in practise.

In this situation, National Accounts must use an indirect measure called financial intermediation services indirectly measured (FISIM) of the value of the services for which the intermediaries do not charge explicitly. The value of FISIM is calculated by using a reference rate which is the average rate of loans and deposits between FISIM producers or credit institutions.

- FISIM loans: average rate of loans - (reference rate * loan stock)

- FISIM deposits: (reference rate * deposit base) - average rate of deposits

In the past, FISIM did not affect the levels of GDP in National Accounts, because they have been entered as intermediate consumption of the nominal undivided sector. This undivided FISIM was regionalised relative to regional GVA in each industry.

Nowadays, Regional Accounts have tried to apply same methodology as National Accounts in FISIM allocation. The methods have been developed together with the FISIM expert of National Accounts. The following data have been used in the compilation:

1) Data from credit institutions on debt to public and general government (excluding Central Government and Social Security Funds) by NUTS 3 region and claims from public and general government (excluding Central Government and Social Security Funds) by NUTS 3 region. Data are collected in a permanent VIRATI co-operation group, which is a

collaboration of the Financial Supervision Authority, the Bank of Finland and Statistics Finland. Data are available from the year 2000 onwards.

2) Regional outstanding credit (by Statistics Finland) and its data on lending by sector of lender and by sector and NUTS 3 / old Province of borrower. Data are available from the year 1979 onwards.

3) Income from interest which are subject to tax at source by LAU 2 region from Income distribution statistics (by Statistics Finland).

4) Households' loans that are part of the final use from Tax authority data.

5) Data on Intermediate consumption of FISIM by industry and by sector from National Accounts.

6) Data on Output by LAU 2 by industry and by sector from Regional Accounts.

From the year 2000 onwards the levels of intermediate consumption of FISIM by NUTS 3 region have been compiled from VIRATI co-operation data to an aggregate consisting of the sectors (a) Non-financial corporations (S111), (b) Households (S14), (c) Housing corporations (S112), (d) Local government (S1313) and (e) Non-profit institutions serving households (S15). The regional / old Provincial levels have been estimated to this sector with the help of VIRATI co-operation data and regional outstanding credit.

The aforementioned sector aggregate by NUTS 3 (old Provinces in the years 1995-1996) has been divided into four sectors with the information from regional outstanding credit: (a) Non-financial corporations and Households (S111+S14), (b) Housing corporations (S112), (c) Local government (S1313) and (d) Non-profit institutions serving households (S15).

The estimations proved that the sector division was not far from National Accounts sector levels, although regional outstanding credit does not include deposits. Therefore, regional outstanding credit could be considered a reliable source for calculations. Households' loans that are part of the final use have to be separated from the estimated sector aggregate. This is done by means of Tax Authority data. In addition, the distributive transaction Unspecified interests (D4123R) is separately estimated by means of income distribution statistics.

Estimated sector distributions were adjusted to NUTS 3 levels and to National Accounts sector frames with the RAS method.

Intermediate consumption of FISIM by NUTS 3 and by sector has been divided to the compilation level of Regional Accounts relative to output at basic prices. In other words, the method is bottom up to NUTS 3 and rough sector division and top down to LAU 2 and industry level with detailed sectors. The producer type Other non-market producers, like most of the Local government sector, is compiled so that the

intermediate consumption of FISIM is not included in the dividing output.

Intermediate consumption of FISIM in sectors (a) Central government (S1311), (b) Financial and insurance corporations (S12) and (c) Social security Funds (S1314) have been regionalised in their entirety to Regional Accounts compilation levels with output at basic prices, because there are no decent source information available. The sum of intermediate consumption of FISIM compiled directly in proportion to output varies between 2 and 9 per cent in the years 1995-2005.

In Regional Accounts the fixed price data of the intermediate consumption of FISIM has been compiled with the deflators from National Accounts totals.

3.1.7. Adjustments for Commuting

There are no adjustments of regional GVA due to commuting or the location of the households in Finland's Regional Accounts. The accounting unit is primarily the establishment. In other cases the production is allocated also to the production place.

3.1.8. Transition from GVA to GDP

When preparing Finland's Regional Accounts of Production and Employment, the production approach consists primarily of calculating GVA. In practice this means that at first output at basic prices is calculated in each industry/sector/municipality combination, from which the corresponding intermediate consumption is then reduced. Intermediate consumption includes both financial intermediation services indirectly measured (FISIM) and other intermediate consumption. Hence Gross value added (GVA) at basic prices is obtained.

Regional GVA can be shown as:

$$\begin{aligned}
 & \text{Output at basic prices} \\
 & - (\text{Financial intermediation services indirectly measured} \\
 & + \text{Other intermediate consumption}) \\
 & = \text{Gross value added at basic prices}
 \end{aligned}$$

Gross value added at basic prices is the sum of gross value added of all industries.

It is possible to calculate gross domestic product (GDP) at market prices by adding Taxes on products (D21) and Subsidies on products (D31) to the GVA at basic prices.

In Finland the method of distributing Taxes on products and Subsidies on products to regions differs from the method that Eurostat recommends. Due to this, the data that Eurostat releases differs from the data which is released nationally.

The method is the following. NUTS 3 level Regional Supply and Use Tables for the year 2002 are benchmarks for estimating regional Taxes on products (D21) and Subsidies on products (D31). In this study both transactions were estimated. Both Taxes on products and Subsidies on products were summed up as totals.

The NUTS 3 data was divided to LAU 2 level in relation to GVA. LAU 2 data were chained backwards and forwards in the time series for 1995-2006* in relation to the change in GVA.

Taxes and Subsidies on products are part of the transformation of the prices. Supply is compiled at basic prices and use at purchasers' prices. Use has to be transformed to basic prices and Taxes and subsidies on products are part of this chain. In NUTS 3 level Regional Supply and Use Tables all the needed transactions were split to products and the transformation of the prices was done by the average ratios per product of Taxes and Subsidies on products in each product.

After the Regional Input-Output Study the results of this method were taken as the basis of the routine production.

Taxes on products and Subsidies on products are distributed to regions in proportion to GVA in the data which Eurostat releases.

3.2. Specific Methods and Sources for Compiling Regional GVA

A cross tabulation table of the industries and sectors is appended at the end of this inventory, which also shows GVA in EUR million.

3.2.1. Agriculture, Hunting and Related Service Activities (A)

Agriculture, hunting and forestry (A) consists of the following two subgroups:

- 01 Agriculture, hunting and related service activities
- 02 Forestry, logging and related service activities

Agriculture, hunting and related service activities (01) consists of the animal-product and cultivable crop production. Forestry, logging and related service activities (02) includes growing of forests and harvesting of wild forestry and other forestry-products.

Agriculture, hunting and related service activities (01) consists of the following five subgroups:

- 0112 Horticulture
- 0125 Other farming of animals
- 013 Growing of crops combined with farming and animals
- 014 Agricultural and animal husbandry service activities, excluding veterinary activities
- 015 Hunting, trapping and game propagation including related service activities

Forestry, logging and related services (02) consists of four accounting sub-industries:

0211 Growing of forests

0212 Timber harvesting

0219 Other forestry and logging activities

0202 Forestry and logging related service activities

The Growing of forests (0211) industry covers forest improvement work and reforestation, forestation of fields, the net growth of the forests and the income from selling raw wood. The Timber harvesting (0212) industry includes felling and short distance haulage of trees. Other forestry (0219) includes other forestry products and environmental protection measures. Forestry and logging related service activities (0202) includes forestry planning and other general promotion of forestry, the activity of forestry societies and boards, and training for forest owners.

All establishments of the Forest industry and related services are classified as market producers. In the Growing of forests, agricultural and forest holdings of municipalities and joint municipal boards are part of General government (S1311), and the forests belonging to the Evangelical Lutheran Church are Non-profit institutions (S15). Other establishments come under Households (S14) or under Non-financial corporations (S111).

3.2.1.1. Main Data Sources

Horticulture (0112) and Other farming of animals (0125)

The industries Horticulture (0112) and Other farming of animals (0125) are compiled from the establishment database of the Business Register both in the Non-financial corporations (S111) and the Households (S14) sectors.

Growing of crops combined with farming and animals (013) and Agricultural and animal husbandry service activities, excl. veterinary activities (014)

The industry Growing of crops combined with farming and animals (013) is estimated from the statistics on the finances of agricultural and forestry enterprises in the Households (S14) sector. On the other hand, the estimation of Non-financial corporations (S111) are compiled from the Structural Business Statistics' establishment database for all activities.

Agricultural and animal husbandry service activities, excl. veterinary activities (014) contains only the activities of the Non-financial corporations (S111). It is compiled from the Structural Business Statistics' establishment database for all activities.

Hunting, trapping and game propagation including related service activities (015)

This industry has similar main sources; the establishment database of the Business Register and Structural Business Statistics' enterprise database, both in the Non-financial corporations (S111) and in the Households (S14) sector.

In addition, data from the Central Organisation of Hunting, Game districts and Local hunter's associations are used in Non-financial corporations (S111).

Data from the Finnish Game and Fisheries Research Institute (RKTL) and the Central Organisation of Hunting and Statistics and Research Åland (ÅSUB) are used in the Households (S14) sector.

Forestry and logging related service activities (0202)

Forestry and logging related service activities (0202) contain activities only in the Non-financial corporations (S111) sector. The key sources are the establishment database of the Business Register and Structural Business Statistics' enterprise database. In addition, the Forest Development Centre Tapio's annual accounts, the Forestry society's annual accounts and the Forest Centres' annual accounts are utilised.

Growing of forests (0211)

The key sources in the industry Growing of forests (0211) in the Non-financial corporations (S111) and the Households (S14) sectors are the establishment database of the Business Register and Structural Business Statistics' enterprise database.

In addition, in the case of Non-financial corporations the Finnish Forestry and Park Service's annual accounts are added for the calculations. Information on the growing of forests and acreage of forests is received from the databases of the Finnish Forest Research Institute (METLA).

In the Households (S14) sector additional data includes Tax Authority data which include information of the Households' forestry levy. Moreover, METLA delivers data about purchase prices, income from felling and maintenance of forest roads.

In the Local Government (S1313) sector the main source are the statistics on the finances and activities of municipalities and joint municipal boards. In addition, METLA delivers data about the growing of forests and the acreage of forests.

In the Non-profit institutions serving households (S15) sector the key data source are the annual accounts of the Evangelical Lutheran Church.

Timber harvesting (0212)

The Timber harvesting (0212) industry is compiled in both the Non-financial corporations (S111) and the Households (S14) sectors with the

establishment database of the Business Register and Structural Business Statistics' enterprise database.

Other forestry and logging activities (0219)

Other forestry and logging activities consist only of the Non-financial corporations' (S111) production. The sources are the establishment database of the Business Register, Structural Business Statistics' enterprise database and the Finnish Forest and Park Service's annual accounts.

3.2.1.2. Output

Horticulture (0112) and Other farming of animals (0125)

The industries Horticulture (0112) and Other farming of animals (0125) are compiled from the establishment database of the Business Register both in the Non-financial corporations (S111) and in the Households (S14) sectors.

The database contains information about employees and the self-employed, turnover and wages and salaries. The unit is an establishment. Data are totalled up by industry, municipality and type of producer.

After this the aggregated data are altered to transactions. The output indicator is total employment (self-employed and employees). At present we have data which are compiled at LAU 2 level and by industry. The sector distribution is taken from National Accounts.

Growing of crops combined with farming and animals (013) and Agricultural and animal husbandry service activities, excl. veterinary activities (014)

The activity of the Households (S14) sector is far significant than in the Non-financial corporations (S111) sector in the industry Growing of crops combined with farming and animals (013). So far, the industry Agricultural and animal husbandry service activities (014) does not include the activity of the Households.

The output of the Non-financial corporations (S111) sector is calculated in both accounting industries by using data from Structural Business Statistics' database for all activities. Output equals the total of turnover, deliveries to other establishments of the company, change in inventories, production for own use and other output from business activities minus rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and acquisition of merchandise.

The output of the Households (S14) sector is compiled using data from the Statistics on the Finances of Agricultural and Forestry Enterprises.

The output of Growing of crops combined with farming and animals (013) consists of the sales of estates' agricultural products, accommodation services, CAP subsidies and other subsidies. The data are in NUTS 3 and sectors in total. After the compilation the data are

reconciled with the National Accounts data. The regional sector distribution is the same as the mean of the National Accounts sector distribution.

The data calculated at NUTS 3 level are distributed to LAU 2 level with the data of the Personal tax register. The indicator is the income on which you have to pay state tax. Income is divided into earnings and capital income.

Hunting, trapping and game propagation including related service activities (015)

The main part of the output in the industry Hunting, trapping and game propagation (015) and the sectors Non-financial corporations (S111) and Households (S14) is calculated using data from the establishment database of the Business Register and Structural Business Statistics' enterprise database. The data are compiled at the unit level and finally aggregated to LAU 2 level.

Structural Business Statistics' enterprise database offers company level data which form the basis of the Output by industry. The output is the total of turnover, change in inventories, production for own use and other output from business activities minus acquisition of merchandise, rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and other rental returns.

After this we obtain the information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged to previous output data. Final output is calculated with the turnover from the establishment database of the Business Register and the output of from Structural Business Statistics' enterprise database.

In addition, other minor sources are used in the Non-financial corporations (S111) sector. Data from the annual accounts of the Central Organisation of Hunters (MKJ) are added. Central government's allowance and other profits are also part of the MKJ's output. Company level data are distributed to the establishments relative to employment, data on which are received from the Business Register.

The MKJ also provides data on Game districts' and Local hunters' associations' financial management. Game districts' output consists of the Central government's allowance, other profits and fund-raising. Local hunters' associations' output consists of Central government's allowance, hunter's examinations, shooting tests, activities of the shooting galleries, competitions and other shooting activities, sales of implement and other profits. This information is distributed to LAU 2 level with the shooting licences of the Game districts and the acreage of forests.

Households' (S14) hunting has to be added to the industry's output. The Finnish Game and Fisheries Research Institute (RKTL) publishes the statistics from which the calculated value of game catch is obtained. This

information is also distributed to LAU 2 level with the shooting licences of the Game districts and the acreage of forests.

Forestry and logging related service activities (0202)

The industry Forestry and logging related service activities (0202) has only the activity of the Non-financial corporations (S111).

The main part of the industry's output is calculated using data from the establishment database of the Business Register and Structural Business Statistics' enterprise database. The data are calculated with the bottom-up method at LAU 2 level.

The company level data are obtained from Structural Business Statistics' enterprise database. The output is the total of turnover, change in inventories, production for own use and other output from business activities minus acquisition of merchandise, rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and other rental returns.

After this we obtain information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous output data. Final output is calculated with the turnover from the Business Register and the output from Structural Business Statistics' enterprise database.

The output of this industry contains also the activities of the Forestry Development Centre Tapio, Forest Management Associations and Forestry Centres.

Tapio's output is calculated using their annual report and the Forest Management Associations' and Forestry Centres' outputs are obtained from Tapio's other statistics. Initially the Forest Management Associations' data are calculated at the Forest Centres level and in other cases at the company level. All data are divided into establishments with the data in the establishment database of the Business Register. The indicator is the wages and salaries received.

Growing of forests (0211)

The production account of the Growing of forests (0211) industry includes the income on the sale of roundwood, the net growth of forests, forest improvement work and reforestation, and afforestation of fields. The output for the industry is obtained by summing up the total of turnover of relevant establishments in the Business Register, the proceeds from selling timber by Households from the data gathered by tax authorities, and the value of the net growth of forests.

The calculation is started by handling the data from Structural Business Statistics' enterprise database. The output consists of the turnover, change in inventories, production for own use and other output from business activities minus acquisition of merchandise, rental returns from

land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and other rental returns.

After this we obtain the information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous output data. Final output is calculated with the turnover from the establishment database of the Business Register and the output from Structural Business Statistics' enterprise database.

The main part of the Households (S14) sector's output is calculated from the Finnish Forest Research Institute's (METLA) data. The sales of raw wood (the value of felling) is obtained by merging the NUTS 3 level data of the Households' felling and stumpage price. The data are divided to LAU 2 level relative to the acreage of forests.

The growth of forests (market producers) is estimated by the Finnish Forest Research Institute by timber assortment, owner group and NUTS 3 based on the data gathered in the National Forest Inventory. The net growth of forests is calculated by deducting the annual felling from the annual growth of forests. In order to estimate the value of net growth, use is made of the annual arithmetic mean for stumpage prices calculated at NUTS 3 level and timber assortment.

Non-profit institutions serving households (S15) calculations are based on the Evangelical Lutheran Church of Finland and its profit and loss statement. The data are obtained at LAU 2 level and parishes and they are changed to National Accounts' transactions and products if the entries represent certain transactions or products in National Accounts.

The indicator of the output is the earnings that the Evangelical Lutheran Church of Finland receives. The data are summed at LAU 2 level, by sector, industry and transaction and reconciled with National Accounts data.

Timber harvesting (0212)

Logging services and short distance hauling of raw wood belong to the Timber harvesting (0212) production account. The output in the Non-financial corporations (S111) and Households (S14) sectors is calculated using data from the establishment database of the Business Register and Structural Business Statistics' enterprise database.

Structural Business Statistics' enterprise database contains the company level data from which the output in this industry is calculated. The output is the sum of turnover, change in inventories, production for own use and other output from business activities minus acquisition of merchandise, rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and other rental returns.

After this we obtain the information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are

distributed to establishments relative to each transaction. These data are merged with previous output data. Final output is calculated with the turnover from the establishment database Business Register and the output from Structural Business Statistics' enterprise database.

Other forestry and logging activities (0219)

Other forestry and logging activities (0129) consists only of the Non-financial corporations (S111) sector. Most of the output derives from the environmental protection activities of the National Board of Forestry. All activity belongs under Market output. The sources of output are the National Board of Forestry's profit and loss statement, supplementary questions in Parliament regarding the use of the National Board of Forestry funds, and the establishment database of the Business Register.

The company level data obtained from the profit and loss statement are distributed to establishments relative to employment.

3.2.1.3. Intermediate Consumption

Horticulture (0112) and Other farming of animals (0125)

Intermediate consumption of Horticulture (0112) and Other farming of animals (0125) are calculated with a similar method as the corresponding output.

Growing of crops combined with farming and animals (013) and Agricultural and animal husbandry service activities, excl. veterinary activities (014)

Intermediate consumption of the Non-financial corporations (S111) is calculated in both accounting industries with data received from Structural Business Statistics' enterprise database. It is the sum of purchases during the financial year, establishment's purchases from the company's other establishments, change in inventories, external services and other operating expenses minus acquisition of merchandise, rents from land and water areas, advertising expenses, and research and development expenses. In addition, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

The Households (S14) sector's calculations are based on the statistics on the finances of agricultural and forestry enterprises. Agricultural and animal husbandry service activities (014) do not include the activities of the Households sector.

The intermediate consumption of the industry Growing of crops combined with farming and animals (013) in the Households (S14) sector consists of the purchasing expenses of farm enterprises and other expenses excluding rent of land and insurance charge. The data are obtained by NUTS 3 and sectors in total. The regional sector distribution is similar to that used in National Accounts. NUTS 3 data are aggregated to LAU 2 level with a corresponding method as output.

Hunting, trapping and game propagation including related service activities (015)

Intermediate consumption in the industry Hunting, trapping and game propagation (015) and the sectors Non-financial corporations (S111) and Households (S14) is calculated using data from Structural Business Statistics' enterprise database.

Structural Business Statistics offer company level data which form the basis of the output by industry. Intermediate consumption consists of the purchases during the financial year minus change in inventories, acquisition of merchandise, external services, other operating expenses and rents from land and water areas.

After this we obtain the information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous intermediate consumption data. Final intermediate consumption is calculated with the turnover from the establishment database of the Business Register and the intermediate consumption from Structural Business Statistics' enterprise database.

In addition, other minor sources are used in the Non-financial corporations (S111) sector, such the Central Organisation of Hunters (MKJ) and its profit and loss statement. Its intermediate consumption contains the expenses of the promoting of hunting and game husbandry, hunting journals and other expenses. The company level data are aggregated to establishments relative to employment data from the establishment database of the Business Register.

The MKJ also provides data on Game districts' and Local hunters' associations' financial management. Game districts' intermediate consumption consists of employees travel expenses, administrative costs, premises' expenses, office expenses, information services, public relations, education, counselling, forays of game husbandry, the counting of game husbandry, damage control of game husbandry, various projects and expenses of fund-raising.

Local hunters' associations' intermediate consumption consists of administrative costs, representational expenses, executive management, office expenses, hunter's examinations, education, game husbandry, surveillance of hunting, maintenance of the shooting galleries, competitions and other shooting activities, implement acquisition and other expenses.

The previous data are distributed to the LAU 2 level with the shooting licences of the Game districts and the acreage of forests.

Forestry and logging related service activities (0202)

Industry Forestry and logging related service activities (0202) have only the activity of the Non-financial corporations (S111). The main part of the industry's intermediate consumption is calculated using data from the

establishment database of the Business Register and Structural Business Statistics' enterprise database.

The company level data are obtained from the Structural Business Statistics' enterprise database. Intermediate consumption is the total of purchases during the financial year minus change in inventories, acquisition of merchandise, external services, other operating expenses and rents from land and water areas.

After this we obtain the information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous intermediate consumption data. Final intermediate consumption is calculated with the turnover from the establishment database of the Business Register and the data from Structural Business Statistics' enterprise database.

The intermediate consumption of this industry also contains the activities of the Forestry Development Centre Tapio, Forest Management Associations and Forestry Centres. The intermediate consumption consists of those expenses, which are not staff expenses, depreciation or financing costs.

Tapio's intermediate consumption is calculated using their annual report and Forest Management Associations' and Forestry Centres' output from Tapio's other statistics. At first the Forest Management Associations' data are calculated at the Forest Centres level and in other cases at the company level. All data are divided into establishments with data from the establishment database of the Business Register. The indicator is the wages and salaries received.

Growing of forests (0211)

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 calculations are based on the establishment database of the Business Register and Structural Business Statistics' enterprise database. At first, company level data by industry are compiled from Structural Business Statistics. Intermediate consumption is the sum of purchases during the financial year minus change in inventories, acquisition of merchandise, external services, other operating expenses and rents from land and water areas.

Then the information about establishments' turnover, employment, wages and salaries is obtained from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are

merged with previous intermediate consumption data. Final intermediate consumption is calculated with the turnover from the establishment database of the Business Register and the data from Structural Business Statistics' enterprise database.

The main part of the Households (S14) sector's intermediate consumption is calculated from the Finnish Forest Research Institute's (METLA) data. Forestry levy paid by households is obtained from the Personal Tax Register and summed to LAU 2 level. These data are merged with the METLA's statistics on acquisition supplement, felling, stumpage price and purchase price. Roughly 60% of all purchase costs are assumed to be directed to intermediate consumption. The data are divided to LAU 2 level relative to the acreage of forests.

Non-profit institutions serving households (S15) calculations are based on the Evangelical Lutheran Church of Finland and its profit and loss statement. The data are obtained at LAU 2 level and by parishes and they are changed to National Accounts' transactions and products if the entries represent certain transactions or products in National Accounts.

Intermediate consumption consists of the forestry expenses (Output for own final use) minus forest management expenses of the Evangelical Lutheran Church of Finland. The data are summed at the LAU 2 level, by sector, industry and transaction and they are reconciled with the National Accounts data.

Timber harvesting (0212)

The intermediate consumption of Timber Harvesting (0212) is to be found in the establishment database of the Business Register and Structural Business Statistics' enterprise database.

At first, company level data by industry are compiled from Structural Business Statistics' enterprise database. Intermediate consumption is the sum of purchases during the financial year minus change in inventories, acquisition of merchandise, external services, other operating expenses and rents from land and water areas.

Then the information about establishments' turnover, employment, wages and salaries is obtained from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous output data. Final intermediate consumption is calculated with the turnover from the establishment database of the Business Register and the data from Structural Business Statistics' enterprise database.

Other forestry and logging activities (0219)

Other forestry and logging activities (0219) consists only of the Non-financial corporations (S111) sector. The sources of intermediate consumption are the National Board of Forestry's profit and loss statement, supplementary questions in Parliament regarding the use of the National Board of Forestry funds, and establishment database of the

Business Register data. The company level data received from the profit and loss statement are distributed to establishments relative to employment.

3.2.2. 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. In addition, fish farming, other water gardening and fishing related service activities are considered to belong, in part, to this industry.

Professional and part-time fishing and fish farming are market output (P11) of market producers (T10). Spare-time fishing is considered to belong in its entirety to the Households sector's producers for own final use (T20). Its output is mainly Output for own final use (P12). Part of the catch is classified as Market output (P11), since a large part of the catch of spare-time crayfishers, for example, is sold.

3.2.2.1. Sources

The main sources in both the Non-financial corporations (S111) and the Households (S14) sectors are the establishment database of the Business Register and Structural Business Statistics' enterprise database. In addition, the Finnish Game and Fisheries Research Institute's statistics on spare time fishers is used in the Households sector.

3.2.2.2. Output

The output of the Fishing industry is obtained on the basis of the establishment Database of the Business Register and Structural Business Statistics' enterprise database. The entire value of the output is classified as market production.

At first, the company level data are obtained from Structural Business Statistics' enterprise database. The output consists of the turnover, change in inventories, production for own use and other output from business activities minus acquisition of merchandise, rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and other rental returns.

After this we obtain the information about establishments' turnover, employment and wages and salaries from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous output data. Final output is calculated with the turnover from the establishment database of the Business Register and the output from Structural Business Statistics' enterprise database.

The value of part-time fishing, or output for own final use, is found in the Finnish Game and Fisheries Research 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.

At first, the volume of part-time fishing is distributed to NUTS 2 level with the volume of part-time fishers, which is also obtained from the Finnish Game and Fisheries Research Institute's statistics. These data are distributed to LAU 2 level with the mean population.

3.2.2.3. Intermediate Consumption

Intermediate consumption is intermediate consumption of fishing professionals and fish farming obtained from the establishment database of Business Register and Structural Business Statistics' enterprise database.

At first, the company level data by industry are compiled from Structural Business Statistics' enterprise database. Intermediate consumption is the sum of purchases during the financial year minus change in inventories, acquisition of merchandise, external services, other operating expenses and rents from land and water areas.

Then the information about establishments' turnover, employment, wages and salaries is obtained from the establishment database of the Business Register. Previously compiled company level data are distributed to establishments relative to each transaction. These data are merged with previous intermediate consumption data. Final intermediate consumption is calculated with the turnover from the establishment database of the Business Register and the output from Structural Business Statistics' enterprise database.

3.2.3. Mining and Quarrying (C), Manufacturing (D) and Electricity, Gas and Water Supply (E)

Mining and quarrying (C) include the extraction, processing and exploitation of minerals occurring in the nature (also contracting). It consists of the following three subgroups:

- 10 Mining and quarrying of energy producing materials
- 13 Mining of metal ores
- 14 Other mining and quarrying

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.

Manufacturing (D) consists of the following several subgroups:

- DA Manufacture of food products, beverages and tobacco
- DB Manufacture of textiles and textile products
- DC Manufacture of leather and leather products
- DD Manufacture of wood and wood products
- DE Manufacture of pulp, paper and paper products, publishing and printing
- DF Manufacture of refined petroleum products, coke and nuclear fuel
- DG Manufacture of chemicals and chemical products
- DH Manufacture of rubber and plastic products
- DI Manufacture of other non-metallic mineral products
- DJ Manufacture of basic metals and fabricated metal products
- DK Manufacture of machinery and equipment n.e.c.
- DL Manufacture of electrical and optical equipment
- DM Manufacture of transport equipment
- DN Manufacturing n.e.c. and recycling

Electricity, gas and water supply (E) 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.

3.2.3.1. Sources

The key source for Regional Accounts estimates is the Structural Business Statistics' establishment database for industry. The additional establishments, which are delimited from the establishment database's actual description, are added. The content and concepts of the sources meet the accounting needs of Regional Accounts satisfactorily.

Additional variables are also obtained from Structural Business Statistics' enterprise data, which are distributed to establishments relative to the employment of the establishments. The impact on calculations is insignificant, but these additional units are included to ensure exhaustiveness. The data in the establishment database of the Business Register are used to check classifications and exhaustiveness.

3.2.3.2. Output

Figures for manufacturing are made at the establishment level and at the five-digit industrial classification level and then aggregated and matched with the National Accounts data at the two-digit or three-digit level. The

basic idea of the calculation is identical for all branches of industry (CDE).

In 2005 Structural Business Statistics' establishment database for industry included just short of 29,000 establishments which were obtained directly. The number of establishments delimited from SBS's actual description is circa 10,000. However, it has to be noted that the share of the output in the actual SBS database is 99.7% of the overall output of industry (CDE). The corresponding share of intermediate consumption is circa 98.6%. At the LAU 2 level the differences may be larger, but the share of these establishments is marginal anyhow.

The basis of output is turnover. Then deliveries to companies other establishments are added. They are valued as deliveries to exteriors. Change in inventories, production for own use and other output from business activities are added to turnover and deliveries. In addition, rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and acquisition of merchandise are reduced.

3.2.3.3. Intermediate Consumption

Intermediate consumption consists of purchases during the financial year, purchases from the company's other establishments, change in inventories, external services and other operating expenses. Moreover, acquisition of merchandise, rents from land and water areas, research and development expenses during the financial year are reduced. In addition, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

3.2.4. Construction (F)

Construction (F) includes general construction of buildings and special line construction concerning buildings and land and water areas, building installation and building completion. In Finland's Regional Accounts construction is divided into three subgroups:

- 4501 Building of complete constructions and or parts thereof
- 4502 Civil engineering
- 4509 Construction service activities

3.2.4.1. Sources

The main sources for calculating purposes are Statistics Finland's building construction statistics and Structural Business Statistics' establishment database for all industries. Additional variables are also obtained from Structural Business Statistics' enterprise database, which are distributed to establishments relative to the employment of the

establishments. The impact on calculations is insignificant, but these additional units are included to ensure exhaustiveness. The data in the establishment database of the Business Register are used to check classifications and exhaustiveness.

3.2.4.2. Output

The output of Non-financial corporations (S111) is calculated using data from the Structural Business Statistics' establishment database for all activities. 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).

The output of Non-financial corporations is the total of turnover, deliveries to a company's other establishments, change in inventories, production for own final use and other output from business activities minus rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and acquisition of merchandise.

The production of the Households (S14) is divided into Market producers (T10) and Producers for own final use (T20). Output for own final use (P12) consists of new construction and renovation. Yearly repairs are recorded to Market output (P11).

The output of Market producers is calculated from Structural Business Statistics' establishment database for all activities. It consists of the same variables as the output of the Non-financial corporations.

The output of the Producers for own final use (T20) in Households (S14) is derived from the building construction statistics. The indicator is the value of construction industry from which the purpose of use and owners are separated with fitted quality classifications.

Local government (S1313) and the industry Civil engineering (4502) methods are discussed below in Chapter 3.2.10.3.

3.2.4.3. Intermediate Consumption

The same sources are used when calculating intermediate consumption. The output in the Non-financial corporations (S111) and Households (S14) sectors (Market producers) consists of the purchases during the financial year, purchases from other establishments of the company, change in inventories and other operating expenses minus acquisition of merchandise, rents from land and water areas, subcontracting expenses, advertising expenses and research and development expenses. In addition, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

The intermediate consumption of Households (Producers for own final use) is estimated in relation to the output. The method is industry desegregation.

3.2.5. Trade; Repair of Motor Vehicles and Household Goods (G)

This industry consists of wholesale and retail trade, repair of motor vehicles and household goods. Wholesale trade and retail trade are the final step in the delivery of commodities.

Trade industry can be divided into five subgroups:

501 Sale of motor vehicles; service stations

502 Repair and maintenance of motor vehicles

51 Wholesale trade and commission trade

521 Retail trade

527 Repair of household goods

3.2.5.1. Sources

The main source of the trade industry are Structural Business Statistics' establishment database for all activities.

3.2.5.2. Output

Output at basic prices in the trade sector comprises market output and output for own final use (compute software). The majority of market output is formed of the so-called trade margin, or trade commissions, that is, the difference between the purchase price paid and the selling price received by trade.

Estimates of trade industry (501 Sale of motor vehicles, 51 Wholesale trade and commission trade, and 521 Retail trade) start with turnover. Deliveries to a company's other establishments, production for own use and other return on business activities are all added to turnover. Acquisition of merchandise and rental returns from land and water areas are deducted from this.

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 the other trade industries. In repair industries, output consists of turnover, deliveries to a company's other establishments, production for own use and other return on business activities minus rental returns from land and water areas.

3.2.5.3. Intermediate Consumption

Included in intermediate consumption are purchases during the financial year, purchases from a company's other establishments, change in inventories, external services and other operating expenses. Acquisition of merchandise and rents from land and water areas are deducted. In

addition, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation. Intermediate consumption in repair industries is calculated with a similar method, but acquisitions of merchandise are not deducted.

3.2.6. Hotels and Restaurants (H)

The Hotel and restaurants (H) industry is divided into two sub-industries. Industry 551 Hotels includes the provision of lodgings for overnight stay by clients in return for payment. This category includes the following three-digit industries:

551 Hotels

552 Camping sites and other provision of short-term accommodation

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

553 Restaurants, cafés/restaurants and food kiosks

554 Coffee and beverage bars

555 Staff and institutional canteens and catering

In many cases, one establishment has both hotel and restaurant activities. Thus, there may be some overlaps in these industries because dispensing alcohol is an independent action but it is also part of restaurant activities. Likewise, restaurants are independent activities but they can be included in hotels.

3.2.6.1. Sources

The main source in Hotels and restaurants (H) are the Structural Business Statistics' establishment database for all activities.

3.2.6.2. Output

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

Estimates start with turnover. Deliveries to a company's other establishments, change in inventories, production for own use and other return on business activities are all added to turnover. Proceeds from sales of fixed assets are deducted from this.

3.2.6.3. Intermediate Consumption

Intermediate consumption of hotel and restaurant activities consists of purchases during the financial year, purchases from a company's other establishments, change in inventories, external services and other

operating expenses minus rents from land and water areas. In addition, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

3.2.7. *Transport, Storage and Communication (I)*

Transport, storage and communication (I) includes 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 this industry, which consists of two sub-industries:

IA Transport and storage

IB Post and telecommunications

Transport and storage (IA) covers transport via railways, other land transport (such as tram transport, underground train transport, taxi operation and bus transport), transport via pipelines, water transport, air transport and space transport. Supporting and auxiliary transport activities and travel agencies also belong to this sub-industry. Transport and storage (IA) can be divided into sub-industries:

601 Transport via railways

6021 Bus, motor-coach, tram and underground train transport

6022 Taxi operation

6024 Freight transport by road

603 Transport via pipelines

61 Water transport

62 Air transport

6301 Railway development

6302 Road development

6303 Supporting air transport activities

6309 Other supporting transport activities

Post and telecommunications (IB) covers:

641 Post and courier activities

642 Telecommunications

3.2.7.1. *Sources*

The main source in both the Non-financial corporations (S111) and the Households (S14) sectors are Structural Business Statistics'

establishment database for all industries. In addition, the establishment database of the Business Register is used in the industry 603 Transport via pipelines. The sources and methods of Central government (S1311) and Local government (S1313) are discussed in Chapters 3.2.10.2. and 3.2.10.3.

3.2.7.2. Output

The methods used differ in each of the computational industries. The most problematic industry is 601 Transport via railways. The methods used in other sub-industries do not produce sufficient quality, which is why the expenditure approach has been selected in this case.

The basis of output in industry 601 Transport via railways are Structural Business Statistics' establishment database for all activities and their value added of production (accordant with the European Union). In practice, it is the SBS's estimated value added. After the calculation, intermediate consumption (accordant with National Accounts) is added to this figure. Intermediate consumption consists of the total of purchases during the financial year, purchases from a company's other establishments, change in inventories, external services and other operating expenses. In addition, acquisition of merchandise and rents from land and water areas are deducted. Moreover, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

The output of industry 603 Transport via pipelines is calculated on the basis of the establishment database of the Business Register. The indicator of output is employment in establishments.

The figures in industries 6021 Bus, motor-coach, tram and underground train transport, 6024 Freight transport by road and 6303 Supporting air transport activities are based on Structural Business Statistics' establishment database for all activities. Output consists of turnover, deliveries to a company's other establishments, change in inventories, acquisition of merchandise, production for own use and other return on business activities. In addition, losses from sales of fixed assets, grant received on the basis of sales, and rents from land and water areas are deducted.

The rest of the industries (6022 Taxi operation, 61 Water transport, 62 Air transport, 6301 Railway development, 6302 Road development, and 6309 Other supporting transport activities) are calculated almost with the same method as other transport industries excl. transport via railways. Output is compounded of similar components, but subcontracting is deducted in addition.

3.2.7.3. *Intermediate Consumption*

Intermediate consumption of Transport via pipelines (603) is obtained from the establishment database of the Business Register. The indicator is employment in establishments.

The method used in the industry Transport via railways (601) differs only slightly from other transport industries. Intermediate consumption in all transport industries consists of purchases during the financial year, purchases from a company's other establishments, change in inventories, external services and other operating expenses. Moreover, acquisition of merchandise and rents from land and water areas are deducted. Also, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

Moreover, in other industries excl. transport via railways subcontracting is reduced.

3.2.8. *Financial Intermediation and Insurance (J)*

Financial intermediation and insurance and activities auxiliary to financial intermediation and insurance are activities that cannot be placed in any other industry.

The industry is divided into three sub-industries:

65 Financial intermediation

66 Insurance

67 Activities auxiliary to financial intermediation and insurance

Financial intermediation (65) is divided into several parts by sectors. In addition to the Central Bank (S121), Deposit Banks (S1221) and Other financial institutions (S1223), it comprises Other monetary financial institutions (S123) and Activities auxiliary to financial intermediation and insurance (S124).

Insurance (66) 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.

Activities auxiliary to financial intermediation and insurance (67) comprise businesses assisting financial and insurance corporations. The industry is split into two groups: activities auxiliary to financial intermediation, except insurance and pension funding, and activities auxiliary to insurance and pension funding.

Output in Financial intermediation and insurance (J) is focused in the sector S12 Financial and insurance corporations.

3.2.8.1. Sources

The main source in Financial intermediation and insurance is the establishment database of the Business Register. Moreover, Financial Statement Statistics on Credit Institutions are used as a source in industry 65 Financial intermediation.

3.2.8.2. Output

Output in sectors S121 The central bank, S123 Other financial intermediaries, S124 Financial auxiliaries, and S125 Insurance corporations is calculated from the establishment database of the Business Register. The indicator is employment in establishments.

Output in sector S122 Other monetary financial institutions is calculated with the income approach. At first, intermediate consumption and compensation of employees are calculated in regions. These transaction are fitted with the proper indicators. That is, intermediate consumption in proportion to employment and compensation of employees in proportion to wages and salaries.

After this Financial Statement Statistics on Credit Institutions provide data on lending and deposits at the company level. The data are then distributed to establishments with the employment obtained from the establishment database of the Business Register. In this way one can analyse distribution of lending and deposits and gross operating surplus inside one institutional unit. Output is obtained by totalling intermediate compensation, compensation of employees and gross operating surplus.

3.2.8.3. Intermediate Consumption

Output in sectors S121 The central bank, S123 Other financial intermediaries, S124 Financial auxiliaries, and S125 Insurance corporations is calculated from the establishment database of the Business Register. The indicator is employment in establishments.

By contrast with the output method, intermediate consumption in the sector S122 Other monetary financial institutions is calculated with the same method as in other Financial intermediation and insurance sectors.

3.2.9. Real Estate, Renting, Research and Business Activities (K)

This industry consists mostly of the activities concerning Non-financial corporations (S111), but almost all activities can be concentrated also in Households (S14) sector. These activities include renting of personal and household goods, database services, detective, guarding and security services and decoration and photographic services.

The industry Real estate, research and business activities (K) consists of two sub-industries: Real estate activities (KA) and Business activities; renting and research activities (KB).

Moreover, Real estate activities (KA) can be divided into sub-groups:

- 701 Real estate activities with own property
- 7021 Letting and operating of dwellings
- 7022 Letting and operating of real estate
- 7031 Real estate agencies
- 7032 Management of real estate on a fee or contract basis

Business activities; renting and research activities (KB) includes the following sub-industries:

- 71 Renting of machinery and equipment
- 72 Computer and related activities
- 73 Research and development
- 741 Legal and financial consultancy; holdings
- 742 Technical activities; testing and analysis
- 744 Advertising
- 747 Industrial cleaning
- 748 Miscellaneous business activities n.e.c.

3.2.9.1. Sources

The key source in industry K Real estate, renting, research and business activities is Structural Business Statistics' establishment database for all activities. This excludes industry 7021 Letting and operation of real estate in all sectors and industry 7032 Management of real estate on a fee or contract basis in the sector S112 Housing corporations.

The main sources in the industry 7021 Letting and operation of real estate in all sectors are Dwelling stock and Rent Statistics. These sources are used as an indicator in the industry 7032 Management of real estate on a fee or contract basis (sector S112 Housing corporations).

The methods and sources of Central government (S1311) and Local government (S1313) are discussed in Chapters 3.2.10.2. and 3.2.10.3.

3.2.9.2. Output

Output of the industry K Real estate, renting, research and business activities is compiled with the same method in the Non-financial corporations (S111) and Households (S14). This excludes industry 7021 Letting and operation of real estate in all sectors and industry 7032 Management of real estate on a fee or contract basis in the sector S112 Housing corporations. The source are Business Structural Statistics' establishment database for all activities.

Output is the total of the following variables: turnover, deliveries to other establishments of the company, production for own use, change in inventories, other output from business activities and proceed from sales

of fixed assets minus rental returns from land and water areas, grants received on the basis of sales and acquisition of merchandise.

Output in the industry 7021 Letting and operating of real estate consists of real or imputed rents for dwellings and holiday homes. Real rents are those of dwellings that are let (excl. 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 methods, is used to calculate dwelling output. The real and imputed rents of holiday homes are based on housing costs calculated by means of data from the Household Budget Survey.

The gross rents of dwellings were calculated in the base year using a classification method as the product of the stock and rents per square metre. The housing stock and rents are classified according to the following variables:

1. House type
2. Tenure status
3. Region, according to house type
4. Number of dwellings rooms, according to house type

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

The production in the industry 7032 Management of real estate on a fee or contract basis (sector S112 Housing corporations) consists of the caretakers hired by housing corporations. Output in the industry 7021 is used as an indicator in the industry 7032.

3.2.9.3. Intermediate Consumption

Intermediate consumption of the industry K Real estate, renting, research and business activities is compiled with the same method in the Non-financial corporations (S111) and Households (S14). This excludes industry 7021 Letting and operation of real estate in all sectors and industry 7032 Management of real estate on a fee or contract basis in the sector S112 Housing corporations. The source are Business Structural Statistics' establishment database for all activities.

Intermediate consumption is the total of the following variables: purchases during the financial year, purchases from a company's other establishments, change in inventories, external services and other operating expenses minus acquisition of merchandise, rents from land and water areas and research and development expenses. In addition, 30% of the software design and programming services is deducted from intermediate consumption. Other 70% is part of the Gross fixed capital formation (P51). The distribution is based on the National Accounts' estimation.

Intermediate consumption of the industries 7021 and 7032 is estimated with the indicator, which is the output of these industries.

3.2.10. Administration, Compulsory Social Security (L)

The actions carried out by general government are part of this category. Juridical or institutional status is not necessarily a commanding factor.

General government consists of Central government (S1311), Local Government (S1313, both municipalities and joint municipal boards) and Social security funds (S1314). General government's activities include enacting laws, preparing regulations, managing public finance, granting licences, monitoring businesses, running and monitoring social services, managing administrative registers, etc.

Activities classified elsewhere are not included in this industry even if they would be carried out by general government. For example, school administration (regulations, controlling school system, syllabus, etc.) belongs to the industry L, but teaching itself belongs to industry M (Education).

Only Central government (S1311), Local government (S1313), Employment pension schemes (S13141), and Other social security funds (S13149) have activities in this industry. A general description of public institutions is given in this Chapter.

3.2.10.1. Sources

The key sources in the Central government (S1311) sector are Financial Statement and Report Data of Central Government and the establishment database of the Business Register. In addition, Structural Business Statistics' establishment database for all activities are used in the industry 6301 Road development and volume of conscripts and time spent in the army are used in the industry 752 Defence equipment and conscripts. The latter data are obtained from employment statistics.

The main source while compiling the Local government (S1313) sector is Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards. In addition, the Association of Finnish Local and Regional Authorities' and the Commission for Local Authority Employers' production is added. The data of the Government of Åland are obtained from Statistics and Research Åland (ÅSUB). The industry 0211 Growing of forests is discussed in Chapter 3.2.1.

The establishment database of the Business Register and its information about employment is used as a source in the sectors Employment pension schemes (S13141) and Other social security funds (S13149). The industry 7021 Letting and operating of dwellings is discussed in Chapter 3.2.9.

3.2.10.2. Central Government

The Central government's (S1311) share of value added in the Finnish economy has been around 5% for the last twenty years. 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 Local government (S1313).

In addition to being responsible for the final accounts of offices charged with budget accounting duties, Central government controls extra-budgetary funds: The Development Fund of Agriculture and Forestry, the Oil Pollution Compensation Fund, the National Nuclear Waste Management Fund, the National Housing Fund, the State Pension Fund, the National Export Guarantee Fund, the National Emergency Supply Agency, the Intervention Fund of Agriculture, the Government Guarantee Fund, the Fire Protection Fund and the National TV and Radio Fund. In 2005 unincorporated state enterprises belonging to the enterprise sector were: Senate Properties, the Shipping Enterprise, the Finnish State Pilotage Enterprise, the Finnish Forest and Park Service, the Civil Aviation Administration, and the Finnish Road Enterprise. Companies over which the government has partial or full control also belong to the enterprise sector.

Central government production in 2005 is divided among 13 accounting industries:

- 6301 Railway development
- 6302 Road development
- 6309 Other supporting transport activities
- 7032 Management of real estate on a fee or contract basis
- 73 Research and development
- 742 Technical services, testing and analysis
- 748 Miscellaneous business activities
- 751 Public administration
- 752 Defence equipment and conscripts
- 80 Education
- 851 Human health activities
- 853 Social work activities
- 92 Recreational, cultural and sporting activities

The methods expressed herein are basically similar to all industries. Exceptions will be discussed separately.

Output

Calculations are mainly performed from the bottom up. The basis of the calculations is the Financial Statement and Report Data of Central

Government. The industries and transactions are defined on the basis of this source. The data are estimated to all accounting offices. The municipality code is added from the establishment database of the Business Register. In addition, the funds are added to basic data.

The accounting office data are divided to establishments relative to the amount of employees, which is received from the establishment database of the Business Register. The Central government sector's output is obtained by totalling Intermediate consumption (P2) and Compensation of employees (D1). Compensation of employees is further divided into Wages and salaries (D11) and Employers' social contributions (D12). Consumption of fixed capital (K1) is not regionalised separately but it is divided relative to other transactions.

The industries Railway development (6301) and Defence equipment and conscripts (751) are the exceptions in the Central government sector.

In Railway development (6301) the main source is Structural Business Statistics' establishment database for all activities from which the information on quasi-corporations is obtained. Output is distributed to municipalities relative to SBS modelled gross value.

In the industry Defence equipment and conscripts (751) the main source is the annual register-based employment statistics from which the enlistment of conscripts is received. Output is divided into the garrisons and finally to municipalities with this information.

Intermediate Consumption

The main part of the Central government's intermediate consumption is compiled more or less the same way as output. The main source is the Financial Statement and Report Data of Central Government.

Key items to be calculated as intermediate consumption are materials, supplies and goods, rents, various purchases of services, various payments and value-added-type taxes added to the above. The total of separately purchased software investments, which are counted as investments, is deducted from the intermediate consumption of each industry.

Intermediate consumption in industries 6301 and 752 is estimated with the indicator method. This means that the indicator is the formerly estimated output in these industries.

3.2.10.3. Local Government

The Local government (S1313) sector is demarcated by the activities of municipalities and joint municipal boards, the Government of Åland (incl. its pension fund), 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 boards do not come under the Local government sector as a whole, but a

part of their utilities are counted as quasi-corporations in the Non-financial corporations (S111) sector. The most common municipal utilities are heating and electric power plants, water supply and purification plants, harbours, and mass transit authorities.

In 2005 the following industries are calculated in the Local government sector:

- 0211 Growing of forests (T10 Market producers)
- 4502 Civil engineering
- 61 Water transport
- 6302 Road development
- 7022 Letting and operation of real estate (T10 Market producers)
- 748 Miscellaneous business activities n.e.c. (T10 Market producers)
- 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 (T10 Market producers)
- 92 Recreational, cultural and sporting activities

Of these industries, Growing of forests (0211), Letting and operation of real estate (7022), Miscellaneous business activities n.e.c. (748) and Sewage and refuse disposals, sanitation and similar activities (90) are Market producers (T10) and other industries are Other non-market producers (T30).

Municipalities and joint municipal boards are also involved in the industry Real estate activities with own property (701). Due to the insufficiency of source data, no separate production accounts are calculated for that industry. Instead, it is included as ancillary production in the industries of other Local government sectors.

In this context all industries of the Local government are discussed. The only exception is the industry Growing of forests (0211) which is discussed in Chapter 3.2.1.

Output

The key data source in the Local government sector are Statistics on the Finances and Activities of Municipalities and Joint Municipal Boards. In National Accounts the data are aimed to compile exactly at the unit level because industries and COFOG functions need to be compatible.

Therefore, the corrections obtained from the Finances and Activities of Municipalities and Joint Municipal Boards can be carried out at the unit level. For example, Consumption of fixed capital have to be divided from the industry level to the unit level relative to indicators.

National Accounts' strict calculation is very suitable for the needs of Regional Accounts. An individual municipality is the smallest calculation unit in Regional Accounts.

Output at basic prices (P1) is calculated as a sum of Gross value added (B1GPH) and Intermediate consumption (P2). Gross value added at basic prices consists of Consumption of fixed capital (K1) and Compensation of employees (D11 + D12). Consumption of fixed capital is divided relative to wages and salaries. Compensation of employees are based on the proper data. Other taxes on production (D29) are divided relative to output in the industry 90 Sewage and refuse disposal.

After 2005 there has been a need to account for the effect of the Joint authority of Kainuu Region. It is a significant experiment in Finland where mostly Local government tasks but also some Central government tasks are transferred to the Joint authority of Kainuu region. Its tasks include almost all decision-making in municipalities except comprehensive school, civil colleges and some technical questions concerning business activities and environment. When compiling Regional Accounts, these actions have to be netted out from the activities (the Joint authorities' sales proceeds from municipalities and other municipalities' purchase of services).

After the treatment of the Joint authority of Kainuu region, the data of the Government of Åland is added. It is received from its pension funds' annual report and accounts. The data are totalled by industry and transaction. They are divided relative to population to municipalities. In addition, the industry 61 Water transport is divided to establishments from the data received from the establishment database of the Business Register.

Intermediate Consumption

The following expenditure categories in the financial statistics of local government are calculated for intermediate consumption: customer service purchases from central government, municipalities, joint municipal boards and others; purchases of other services, materials, supplies and goods, miscellaneous expenses, and external rent expenditure. The municipalities, using central government transfers, finance part of the health and social services production of joint municipal boards. These transfers appear in the financial statistics of these industries as purchases of client services from joint municipal boards. These transfers between municipalities and joint municipal boards are taken out of intermediate consumption.

Purchases of customer services by local government from others include services purchased directly from enterprises, foundations, associations

and parishes for residents without any payment by residents. These purchases are treated, not as intermediate consumption, but as social transfer payments (benefits in kind), as they are not part of the service production of municipalities and joint municipal boards. These transfer payments in kind are recorded directly in government consumption.

3.2.10.4. Employment Pension Schemes

The sector Employment pension schemes (S13141) has production in the industries 7021 Letting and operating of dwellings and 7531 Employment pension insurance. The industry 7531 Employment pension insurance is discussed in this Chapter. The industry 7021 Letting and operating of dwellings is discussed in Chapter 3.2.9.

In Finland the industry 7531 Employment pension insurance includes insurance companies, pension funds and trust specialised in statutory (compulsory) employment insurance and other pension institutions.

Output

The main source used to calculate the industry 7531 is the establishment database of the Business Register and its data on employment. The obtained employment data are summed up by industry, sector and municipality and adjusted with the National Accounts data.

Intermediate consumption

Intermediate consumption is assumed to distribute by output.

3.2.10.5. Other Social Security Funds

Other social security funds (S13149) consists only of the industry 7539 Other compulsory social security. This industry covers sub-industries 75301 Social insurance institution and 75309 Benefit specialising in unemployment insurance.

Output

The main source to calculate Other social security funds is the establishment database of the Business Register and its data on employment. The obtained employment data are summed up by industry, sector and municipality and adjusted with the National Accounts data.

Intermediate consumption

Intermediate consumption is assumed to distribute by output.

3.2.11. Education (M)

Education or schooling is an activity, whose purpose is to evoke learning. This industry includes comprehensive schools, upper secondary schools, vocational schools, universities and other educational institutes.

In Finland production by the private sector in the field of education is scarce, especially when compared with the public sector production.

Market production accounted for nearly 5% of the production value of education in 2005. Ten years ago this share was a good 3%.

3.2.11.1. Sources

The main source in both the Non-financial corporations (S111) and Households (S14) sectors is the Structural Business Statistics' establishment database for all activities.

3.2.11.2. Output

The calculations in the Non-financial corporations and Households sectors are based on the Structural Business Statistics' establishment database for all activities. The basis of the calculations is turnover to which deliveries to other establishments of the enterprise, change in inventories of finished products, production for own use and other operating output are added. After the summation, rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and acquisition of merchandise are reduced.

3.2.11.3. Intermediate consumption

The calculations in the Non-financial corporations and Households sector are based on the Structural Business Statistics' establishment database for all activities. Intermediate consumption consists of purchases during the financial year, purchases from other establishments of the enterprise, change in purchase inventories, external services and other operating expenses. Moreover, acquisition of merchandise, rental returns from land and water areas, marketing expenses activated in the financial year, research and development expenses activated in the financial year and 30% of the computer, design and programming expenses are deducted. Other 70% goes to gross fixed capital formation (P51). The distribution is based on the estimation made in the National Accounts.

3.2.12. Health and Social Work (N)

The main group of Health and social work (N) is divided into three accounting industries:

851 Human health activities

852 Veterinary activities

853 Social work activities

In 2005 the share of the market producers in this industry was circa 25%.

3.2.12.1. Sources

Health and social work activities is calculated by means of the Structural Business Statistics' establishment database for all activities in the Non-financial corporations (S111) and Households (S14) sectors.

3.2.12.2. Output

Output of health and social work is calculated by means of the Structural Business Statistics' establishment database for all activities in the Non-financial corporations and Households sectors. The same method is applied in the industries 851 Human health activities and 853 Social work activities but the calculation of the industry 852 Veterinary services differs slightly from the other industries.

The starting point for a calculation in the industries 851 and 853 is turnover obtained from the Structural Business Statistics. Deliveries to other establishments of the enterprise, changes in inventories of finished products, production for own use and other return on business activities are all added to turnover, in accordance with the Structural Business Statistics. Rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and acquisition of merchandise are deducted from this.

In the industry 852 the method applied is similar to that in the other industries with the exception of grants received on the basis of sales, which are not deducted.

3.2.12.3. Intermediate consumption

Intermediate consumption of health and social work is calculated by means of the Structural Business Statistics' establishment database for all activities in the Non-financial corporations and Households sectors. The method of the industry 852 Veterinary activities differs also from the other two industries.

In the industries 851 and 853 intermediate consumption consists of purchases during the financial year, purchases from other establishments of the enterprise, change in purchase inventories, external services and other operating expenses. Acquisition of merchandise, rental returns from land and water areas, marketing expenses activated in the financial year, research and development expenses activated in the financial year and 30% of the computer, design and programming expenses are deducted. Other 70% goes to gross fixed capital formation (P51). The distribution is based on the estimation made in the National Accounts.

In the industry 852 intermediate consumption consists of purchases during the financial year, purchases from other establishments of the enterprise, change in purchase inventories, external services and other operating expenses. Acquisition of merchandise, rental returns and 30% of the computer, design and programming expenses. On the other hand, marketing, research and development expenses activated in the financial year are not deducted in this industry. Instead leasing rents and other rents are deducted.

3.2.13. Other Community, Social and Personal Service Activities (O)

Other community, social and personal activities (O) consists of a great variety of activities. Seven accounting industries are formed of the main group:

90 Sewage and refuse disposal, sanitation and similar activities

911 Activities of employers and business organisations, trade unions

9131 Activities of religious organisations

9139 Activities of other membership organisation n.e.c.

92 Recreational, cultural and sporting activities

9301 Washing and dry-cleaning of textile and fur products

9309 Other personal service activities

The calculation methods of Non-financial corporations (S111), Households (S14) and Non-profit institutions serving households (S15) are discussed in this Chapter.

3.2.13.1. Sources

The data source used for this industry in the Non-financial corporations and Households sectors is the Structural Business Statistics' establishment database for all activities excluding the industry 911 Activities of employers and business organisations, trade unions in which the source is the establishment database of the Business Register.

In Non-profit institutions serving households the main source is the establishment database of the Business Register. The industries Letting and operating of dwellings (7021) and Growing of forests (0211) are discussed in Chapters 3.2.9. and 3.2.1.

3.2.13.2. Non-financial corporations and Households

Output

The calculating process of output is similar in all industries excluding the industry 911 Activities of employers and business organisations, trade unions. The main source is the Structural Business Statistics' establishment database for all activities.

The basis of the calculations is turnover. Deliveries to other establishments of the enterprise, change in finished product inventories, production for own use and other output from business activities are added to turnover, in accordance with Structural Business Statistics. Rental returns from land and water areas, proceeds from sales of fixed assets, grants received on the basis of sales and acquisition of merchandise are deducted.

In the industry 911 the main source is the establishment database of the Business Register and its information on employment. Output is distributed to the establishments by employment.

Intermediate consumption

The calculating process of intermediate consumption is similar in all industries excluding the industry 911 Activities of employers and business organisations, trade unions. The main source is the Structural Business Statistics' establishment database for all activities.

Intermediate consumption consists of purchases during the financial year, purchases from other establishments of the enterprise, change in purchase inventories, external services and other operating expenses. Acquisition of merchandise, rental returns from water and land areas, marketing expenses activated in the financial year, research and development expenses activated in the financial year and 30% of the computer, design and programming expenses. Other 70% goes to gross fixed capital formation (P51). The distribution is based on the estimation made in the National Accounts.

It is assumed that intermediate consumption is distributed relative to output.

3.2.13.3. Non-profit Institutions Serving Households

In this Chapter the methods of the following industries in Non-profit institutions serving households (S15) are discussed:

- 6302 Road development
- 73 Research and development
- 80 Education
- 851 Human health activities
- 853 Social work activities
- 911 Activities of employers and business organisations, trade unions
- 9131 Activities of religious organisations
- 9139 Activities of other membership organisations n.e.c.
- 92 Recreational, cultural and sporting activities

Moreover, the calculations of industries 0211 Growing of forests and 7021 Letting and operation of dwelling are discussed in Chapters 3.2.1. and 3.2.9.

Output and Intermediate consumption

Output and intermediate consumption of Non-profit institutions serving households are based on the establishment database of the Business Register and its data about employment. All establishments in this sector are obtained from the database and summed by industry, sector and

municipality. Output and intermediate consumption are distributed to municipalities and industries by employment.

3.2.14. Household Service Activities (P)

The value of households service activities (P) equals compensation of employees (wages and salaries plus employers' social contributions) which households pay to hired chefs, servants, childminders, nurses, private teachers, chauffeurs and other employees.

No intermediate consumption or investments occur in the industry because any intermediate products regarded as direct final consumption expenditure by households, so output and gross value added equal compensation of employees.

3.2.14.1. Sources

The main source of the calculations are accident insurance data obtained from The Federation of Accident Insurance Institutions from which paid insurance premiums are picked up.

3.1.14.2. Output

Output of household service activities is calculated on the basis of the accident insurance data and its data on paid insurance premiums. LAU 2 level data are matched with the National Accounts data.

3.2.14.3. Intermediate Consumption

No intermediate consumption occurs in this industry because any intermediate products required are regarded as direct final consumption expenditure by households.

3.2.15. Extra-territorial Organisations and Bodies (Q)

Extraterritorial organisations and bodies and foreign missions do not belong to the economic territory of Finland. These include, besides foreign missions, the United Nations' WIDER Institute and the Nordic Investment Bank.

3.3. Regional GVA at Constant Prices and Regional Growth Rates

Regional Accounts' transactions at fixed prices are produced with the National Accounts' annual deflators. Regional gross value added is not deflated directly but it is calculated with the difference of output at fixed prices and intermediate consumption. The latter is deflated separately, and consequently FISIM and other intermediate consumption are deflated separately.

Output of which FISIM has been deducted is created to other non-market producers of the General government sector. These segments of output are deflated separately and gross value added is calculated from the

ensemble. In the General government sector the entry of volume indicators is from the year 2001.

Transactions at fixed prices are calculated and published at the same region, industry and sector aggregate level as the transactions at current prices.

Regional Accounts releases also transactions at the reference year 2000 prices. Transactions are chain-linked, in which case problems are magnified when proceeding to the detailed level.

4. QUALITY ASSESSMENT AND IMPROVEMENT

4.1. Self-assessment of the Methodology for Compilation of Regional GVA

In Regional Accounts the classification of methods is used for analysing the quality level of regional methods. The methods have divided to four main groups so that the smaller ordinal numbers are used when possible. The methods are:

- 1 Bottom-up
- 2 Pseudo bottom-up
- 3 Industry desegregation
- 4 Top-down

The bottom up method means that all (or almost all) information is available at the establishment level. When using the pseudo bottom-up method, most of the data or all data have to be divided from companies to establishments. The industry desegregation method means that the transactions of National Accounts are divided to industries' establishments in relation to, for example, turnover or employment. In the top-down method the transactions of the industry are estimated with the indicator which should correlate in the best possible way with the described phenomenon.

This classification of methods is somewhat different from the usual method classification. Normally there are three methods, but this four-tier classification was developed because it is more analytical and more descriptive.

Table 4. The relative proportion of output at basic prices at NUTS 3 level and by method in 2005*.

NUTS 3 code	NUTS 3 name	1 Bottom up	2 Pseudo bottom-up	3 Industry desegregation	4 Top-down
FI181	Uusimaa	89,1	3,5	7,3	0,1
FI183	Varsinais-Suomi	92,8	3,2	3,8	0,2
FI191	Satakunta	93,8	2,2	3,7	0,3
FI184	Kanta-Häme	89,8	5,3	4,6	0,2
FI192	Pirkanmaa	92,9	3,4	3,4	0,2
FI185	Päijät-Häme	93,1	2,4	4,3	0,2
FI186	Kymenlaakso	89,5	3,9	6,4	0,2
FI187	South Karelia	91,7	4,6	3,4	0,2
FI131	Etelä-Savo	87,0	6,5	6,1	0,4
FI132	Pohjois-Savo	90,8	4,8	4,1	0,3
FI133	North Karelia	89,4	5,7	4,4	0,4
FI193	Central Finland	90,3	5,7	3,7	0,2
FI194	South Ostrobothnia	92,3	2,4	4,8	0,4
FI195	Ostrobothnia	91,4	3,7	4,5	0,3
FI1A1	Central Ostrobothnia	92,0	2,4	5,3	0,3
FI1A2	North Ostrobothnia	92,9	3,5	3,3	0,3

FI134	Kainuu	83,3	8,4	7,4	0,9
FI1A3	Lapland	89,3	6,7	3,6	0,3
FI182	Itä-Uusimaa	98,0	0,6	1,3	0,1
FI200	Åland	94,0	1,1	4,7	0,3
EXT	External territory		99,4	0,6	

Table 5. The relative proportion of intermediate consumption at purchasers' prices at NUTS 3 level and by method in 2005*.

NUTS 3 code	NUTS 3 name	1 Bottom up	2 Pseudo bottom-up	3 Industry desegregation	4 Top-down
FI181	Uusimaa	87,5	2,6	9,9	0,0
FI183	Varsinais-Suomi	90,3	1,9	7,8	0,1
FI191	Satakunta	92,0	1,2	6,8	0,0
FI184	Kanta-Häme	86,7	3,5	9,7	0,1
FI192	Pirkanmaa	90,6	2,1	7,3	0,1
FI185	Päijät-Häme	89,4	1,3	9,2	0,1
FI186	Kymenlaakso	88,1	2,4	9,4	0,0
FI187	South Karelia	90,5	2,4	7,0	0,1
FI131	Etelä-Savo	84,1	3,0	12,6	0,3
FI132	Pohjois-Savo	87,9	2,6	9,4	0,1
FI133	North Karelia	87,1	2,8	9,9	0,2
FI193	Central Finland	88,1	3,6	8,3	0,1
FI194	South Ostrobothnia	89,5	1,2	9,2	0,1
FI195	Ostrobothnia	90,4	2,0	7,5	0,1
FI1A1	Central Ostrobothnia	88,8	1,2	10	0,1
FI1A2	North Ostrobothnia	90,7	2,1	7,2	0,0
FI134	Kainuu	77,6	6,7	15,6	0,1
FI1A3	Lapland	89,2	4,1	6,7	0,0
FI182	Itä-Uusimaa	97,0	0,2	2,8	0,0
FI200	Åland	90,7	0,6	8,8	0,0
EXT	External territory		98,9	1,1	

In Finland's Regional Accounts the emphasis is on the bottom-up method. In the future there is a need to improve the quality of the method rather than its exhaustiveness.

The structure of the economy differs significantly in Finnish regions. This can also be seen in the calculations of the output and intermediate consumption by method in Finland's Regional Accounts. For example, there are significant differences between the Uusimaa and Itä-Uusimaa regions. In Itä-Uusimaa, manufacturing is very significant, whereas the Uusimaa region is far more service intensive. Moreover, the share of Central government is relatively significant there.

The previous major improvement was made in 2006. At that time the Structural Business Statistics' establishment database for all activities was adopted. It is the key source in calculating, for example, all private services. At the same time the calculation of Forestry was improved. In some cases the pure top down method was substituted by much better methods.

In 2006 the Regional Input Output study was released for the statistical year 2002. Regional Supply and Use Tables are the base year of the present Regional GDP calculation.

In 2005 the method for estimating regional FISIM was elaborated.

4.2. Plans for Further Improvement

Regional Accounts is participating in the improvement of the Structural Business Statistics' establishment database for all activities.

Regional Accounts are going to calculate private consumption expenditure in regions at least for the statistical year 2006. This data can be used in calculating regional GDP.

The next system revision in the National Accounts will take place in summer 2009. This is going to affect the levels of the output and intermediate consumption. These adjustments are going to be made in Regional Accounts at the end of 2009.

There have been preliminary plans to produce Regional Supply and Use tables for the statistical year 2007. It is only possible a year before the industry revision. Moreover, there have been plans to produce a preliminary Regional Accounts release in $t + 8-9$ months.

In summer 2011, National Accounts will release new data in accordance with the NACE revision. The revision is carried out in Regional Accounts in close collaboration with the National Accounts. Regional Accounts' main sources are going to release new data in accordance with the new industry classification as from the statistical year 1995.

Finland's Regional Accounts is participating in the revision of the European System of Accounts.

ANNEX 1. Classifications

Annex 1.1. Classification of Transactions

P1	Output at basic prices
P2	Intermediate consumption at purchasers' prices
P119	Financial intermediation services indirectly measured
P22	Other intermediate consumption
B1GPH	Gross domestic product, at basic prices
D1	Compensation of employees
E1	Employment
E11	Self-employed
E12	Employees
E2	Total hours worked
E21	Self-employed hours worked
E22	Employees hours worked
P51	Gross fixed capital formation

Annex 1.2. Classification of Industries

0	Industries total
0112	Horticulture
0125	Other farming of animals
013	Growing of crops combined with farming and animals
014	Agricultural and animal husbandry service activities, exc. veterinary activ.
015	Hunting, trapping and game propagation including related service activ.
0211	Growing of forests
0212	Timber harvesting
0219	Other forestry and logging activities
0202	Forestry and logging related service activities
05	Fishing, operation of fish hatcheries and fish farms;
10	Mining and quarrying of energy producing materials
13	Mining of metal ores
14	Other mining and quarrying

151	Manufacture of food products
159	Manufacture of beverages
16	Manufacture of tobacco products
17	Manufacture of textiles
18	Manufacture of wearing apparel; dressing and dyeing of fur
19	Manufacture of leather and leather products
20	Manufacture of wood and wood products
21	Manufacture of pulp, paper and paper products
22	Publishing and printing
23	Manufacture of refined petroleum products, coke and nuclear fuel
24	Manufacture of chemicals and chemical products
251	Manufacture of rubber products
252	Manufacture of plastic products
26	Manufacture of other non-metallic mineral products
27	Manufacture of basic metals
28	Manufacture of fabricated metal products
29	Manufacture of machinery and equipment n.e.c.
30	Manufacture of office machinery and computers
31	Manufacture of electrical machinery and apparatus n.e.c.
32	Manufacture of radio, television and communication equipment and apparatus
33	Manufacture of medical and precision products
34	Manufacture of motor vehicles, trailers and semi-trailers
351	Building and repairing of ships and boats
352	Manufacture of other transport equipment n.e.c.
361	Manufacture of furniture
362	Miscellaneous manufacturing n.e.c.
37	Recycling
40	Electricity, gas, steam and hot water supply
41	Collection, purification and distribution of water
4501	Building of complete constructions or parts thereof
4502	Civil engineering
4509	Construction service activities
501	Sale of motor vehicles; service stations

502	Repair and maintenance of motor vehicles
51	Wholesale trade and commission trade
521	Retail trade
527	Repair of household goods
551	Hotels
553	Restaurants
601	Transport via railways
6021	Bus, motor-coach, tram and underground train transport
6022	Taxi operation
6024	Freight transport by road
603	Transport via pipelines
61	Water transport
62	Air transport
6301	Railway development
6302	Road development
6303	Supporting air transport activities
6309	Other supporting transport activities
641	Post and courier activities
642	Telecommunications
65	Financial intermediation
66	Insurance
67	Activities auxiliary to financial intermediation and insurance
701	Real estate activities with own property
7021	Letting and operation of dwellings
7022	Letting and operation of real estate
7031	Real estate agencies
7032	Management of real estate on a fee or contract basis
71	Renting of machinery and equipment
72	Computer and related activities
73	Research and development
741	Legal and financial consultancy; holdings
742	Technical activities; testing and analysis
744	Advertising

747	Industrial cleaning
748	Miscellaneous business activities n.e.c.
751	Public administration
752	Defence equipment and conscripts
7531	Employment pension insurance
7539	Other compulsory social security
80	Education
851	Human health activities
852	Veterinary activities
853	Social work activities
90	Sewage and refuse disposal, sanitation and similar activities
911	Activities of employers and business organisations, trade unions
9131	Activities of religious organisations
9139	Activities of other membership organisations n.e.c.
92	Recreational, cultural and sporting activities
9301	Washing and drycleaning of textile and fur products
9309	Other personal service activities
95	Household service activities

Annex 1.3. Classification of Sectors

S0	Sectors total
S111	Non-financial corporations
S112	Housing corporations
S12	Financial and insurance corporations
S121	The central bank
S1221	Deposit Banks
S1223	Other financial institutions
S123	Other financial intermediaries
S124	Financial auxiliaries
S125	Insurance corporations
S1311	Central government
S1313	Local government
S13141	Employment pension schemes

S13149	Other social security funds
S14	Households
S15	Non-profit institutions serving households

Annex 1.4. Classification of Prices

CP	Current prices
FP	Previous year's prices
RY2000	Reference year's 2000 prices

Annex 1.5. Classification of Methods

1	Bottom-up
2	Pseudo bottom-up
3	Industry desegregation
4	Top-down

Annex 1.6. Classification of Producers by Type

T0	Types of producers total
T1	Market producers
T2	Producers for own final use
T3	Other non-market producers